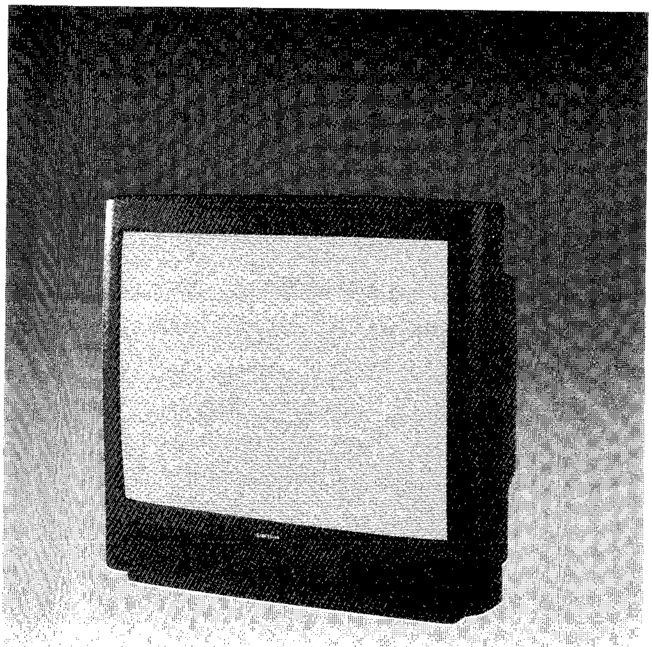
SAMSUNG

COLOUR TELEVISION RECEIVER
CHASSIS : P70 & RM131

SERVICE Manual



CONTENTS

1. Precautions 1

2. Specification 4

3. General Introductions 5

4. Disassembly Instructions 8

5. Alignment and Adjustments 10

6. Power Supply Section 13

7. Chroma,Video,IF,Sound,Deflection Section...... 15

8. Remote Control Section 25

9. Teletext Section(Option) 32

10. Troubleshooting Charts 34

1. Precautions

1-1 Safety Precautions

Before returning the unit to the customer, always make a complete safety check that includes the following:

(1) Be sure that none of the built-in protective devices are defective, or have been defeated during servicing. Replace all missing protective shields, especially any that were removed for servicing.

When reinstalling the chassis or other assemblies, be sure to restore all protective devices,including: nonmetallic control knobs, insulating fishpapers, compartment covers/shields and isolation resistor/capacitor networks.

Do not operate this unit without all protective devices installed and functioning.

(2) Make sure that there are no cabinet openings through which people--especially children--might insert their fingers and contact dangerous voltages.
Such openings include: The spacing between the picture tube and the cabinet mask, excessively wide cabinet ventilation slots, and improperly fitted or incorrectly secured back covers.

(3) Antenna Cold Check:
With the unit's AC plug disconnected from the AC source, connect an electrical jumper across the two AC prongs. Connect one lead of an ohmmeter to the AC prong. Touch the other lead to the coaxial connector. If the measured resistance is less than 1.0 megohm or greater than 5.2 megohms, an abnormality exists that must be corrected before the unit is returned to the customer.

(4) Leakage Current Hot Check (See Figure 1-1):
With the unit completely reassembled, plug the AC line cord directly into a 120V AC outlet (Do not use an isolation transformer during this test).
Use a leakage-current tester or a metering system that complies with American National Standards Institute (ANSI C101.1, *Leakage Current for Appliances),* and Underwriters Laboratories *(UL Publication UL1410, 59.7).*
With the unit's AC switch first in the ON position and then OFF, measure the current between a known earth ground (metal waterpipe, conduit, etc.) and all exposed metal parts, including: antennas, handle brackets, metal cabinets, screwheads and control shafts. The current measured should not exceed 0.5 milliamp. Repeat the test, by reversing the power plug in the AC outlet.

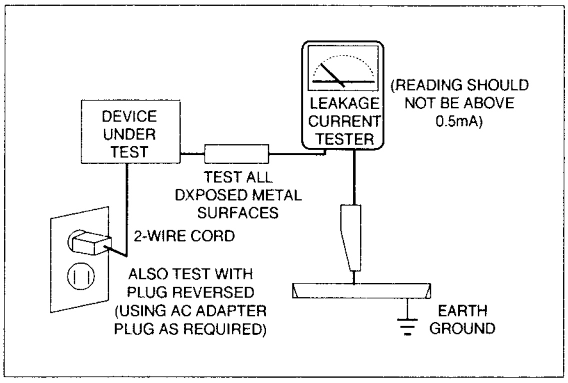

DEVICE UNDER TEST
LEAKAGE CURRENT TESTER
(READING SHOULD NOT BE ABOVE 0.5mA)
TEST ALL DXPOSED METAL SURFACES
2-WIRE CORD
ALSO TEST WITH PLUG REVERSED (USING AC ADAPTER PLUG AS REQUIRED)
EARTH GROUND

Fig. 1-1. AC Leakage Test

(5) X-ray Limits:
The picture tube is especially constructed to prohibit X-ray emissions. To ensure continued X-ray protection, heed the following:

The replacement picture tube must be the same type as the original. Carefully reinstall the picture tube shields and mounting hardware; these also provide X-ray protection.

(6) High Voltage Limits:
High voltage must be measured each time servicing is done on the B+, horizontal deflection or high voltage circuits. Correct operation of the X-ray protection circuits must be reconfirmed whenever they are serviced. (X-ray protection circuits also may be called "horizontal disable" or "hold-down").

Heed the high voltage limits. These include the *X-ray Protection Specifications Label,* and the *Product Safety and X-ray Warning Note* on the service data schematic.

High voltage is maintained within specified limits by close-tolerance, safety-related components and adjustments. If high voltage exceeds the specified limits, check each of these special components (Identified on the schematic) and take corrective action.

(7) Design Alteration Warning - Never alter or add to the mechanical or electrical design of this TV receiver. Example: the addition of auxiliary audio or video output connections.

Such alterations might create a safety hazard. Any design changes or additions will void the manufacturer's warranty. The servicer will be responsible for any personal injury or property damage that results.

(8) Picture Tube Implosion Warning:
The picture tube in this receiver employs integral implosion Protection. To ensure continued implosion protection, the replacement picture tube must be the same as the original.

Do not remove, install, or handle th picture tube without first putting on shatterproof goggles equipped with side shields. Never handle the picture tube by its neck. Some "in-line" picture tubes are equipped with a permanently attached deflection yoke; do not try to remove such "permanently attached" yokes from the picture tube.

(9) Hot Chassis Warning:
Some TV receiver chassis are electrically connected directly to one conductor of the AC power cord. If an isolation transformer is not used, these may be safely serviced *only* if the AC power plug is inserted so that the chassis is connected to the ground side of the AC power source.

To confirm that the AC power plug is inserted correctly, do the following: Measure the voltage between the chassis and a known earth ground. Use an AC voltmeter. If the reading is greater than 1.0V, then remove the AC power plug, reverse its polarity and reinsert. Re-measure the voltage between the chassis and ground.

Some TV chassis are designed to operate with 85 volts AC between chassis and ground, *regardless of the AC plug polarity.* These chassis can be safely serviced *only* if an isolation transformer inserted in the power line between the receiver and the power source.
Some TV chassis have a secondar ground system in addition to the main chassis ground. This secondary ground system is not isolated from the AC power line. The two ground system are electrically separated by insulating material that must not be defeated or altered.

(10) Observe the original lead dress, especially near the following areas: Antenna wiring, sharp edges, and the AC and high voltage power supplies. Always inspect for pinched, out-of-place, or frayed wiring. Do not change the spacing between components and the printed circuit board. Check the AC power cord for damage. Make sure that leads and components do not touch thermally hot parts.

(11) Components, parts and wiring that appear to have overheated or that are otherwise damaged should be replaced with parts that meet the original specifications. Always determine the cause of overheating or damage. Take corrective action to remove any potential hazards.

(12) Product Safety Notice - Some electrical and mechanical parts have special safety-related characteristics which might not be evident from visual inspection. These safety features and the protection they give might be lost if the replacement component differs from the original--even if the replacement is rated for higher voltage, wattage, etc.

Components that are critical for safety are indicated in the circuit diagram by shading, (⚠) or (△). Use replacement components that have the same ratings, especially for flame resistance and dielectric strength specifications. A replacement part that does not have the same safety characteristics as the original might create shock, fire or other hazards.

1-2. Servicing Precautions

CAUTION: First read the "Safety Precautions" section of this manual. If some unforeseen circumstance creates a conflict between the servicing and safety precautions, always follow the safety precautions.

(1) Always unplug the unit's AC power cord from the AC power source before attempting to: (a) Remove or reinstall any component, circuit board or assembly, (b) Disconnect an electrical plug or connector, (c) Connect a test component in parallel with an electrolytic capacitor.

Warning: An electrolytic capacitor installed with the wrong polarity might explode.

(2) Never defeat any of the B+ voltage interlocks. Do not apply AC power to this unit or any of its assemblies unless all solid-state heat sinks are correctly installed.

Always connect a test instrument's ground lead to the instrument chassis ground *before* connecting the positive lead. Always remove the instrument's ground lead last.

(3) The servicing precautions are indicated on the cabinet, chassis or components. Follow them.

(4) Some components are raised above the printed wiring board for safety. An insulation tube or tape is sometimes used. The internal wiring is sometimes clamped to prevent contact with thermally hot components. Reinstall all such elements to their original position.

(5) After servicing, always check that the screws, components and wiring are correctly reinstalled. Make sure that the portion around the serviced part has not been damaged. Check the insulation between the blades of the AC plug and accessible conductive parts. Examples: metal panels,input terminals and earphone jacks.

(6) Insulation Checking Procedure:
Disconnect power cord from the AC source and turn the power switch ON. Connect an insulation resistance meter (500V) to the blades of the AC plug.

The insulation resistance between each blade of the AC plug and accessible conductive parts (see above) should be greater than 1 megohm.

1-3. ESD Precautions

Electrostatically Sensitive Devices (ESDs)

Some semiconductor ("solid state") devices are easily damaged by static electricity. Such components are called Electrostatically Sensitive Devices (ESDs). Examples: integrated circuits and some field-effect transistors. The following techniques will reduce the occurrence of component damage caused by static electricity:

(1) Immediately before handling any semiconductor components or assemblies, drain the electrostatic charge from your body by touching a known earth ground. Alternatively, wear a discharging wrist strap device (Remove it prior to applying power to the unit--this is an electrical shock precaution).

(2) After removing an assembly equipped with ESDs, place it on a conductive surface such as aluminum foil to prevent the build up of electrostatic charge.

(3) Use only a grounded-tip soldering iron when soldering or unsoldering ESDs.

(4) Use only an anti-static solder removal device. Some solder removal devices are not classified as "anti-static"; these can generate sufficient electrical charge to damage ESDs.

(5) Do not use freon-propelled chemicals. These can generate electrical charges that damage ESDs.

(6) Do not remove a replacement ESD from its protective package until you are ready to install it. Most replacement ESDs are packaged with leads that are electrically shorted together by conductive foam, aluminum foil or other conductive materials.

(7) Immediately before removing the protective material from the leads of a replacement ESD, touch the protective material to the chassis or circuit assembly into which the device will be installed.

Caution: Be sure no power is applied to the chassis or circuit. Observe all other safety precautions.

(8) Minimize bodily motions when handling unpackaged replacement ESDs. Motions such as the brushing together of clothes, o lifting a foot from a carpeted floor can generate enough static electricity to damage an ESD.

2. Specifications

(Units:MHz)

Items	System	PAL/SECAM -B/G	PAL/SECAM-B/G -D/K	SECAM - L'/L	PAL - I	Remarks
BAND	VHF	2-12	1-13	B-Q	.	
	UHF	21-69	21-69	21-69	21-69	
	CABLE	S1-S20	S1-S20	S1-S20	.	
	HYPER	S21-S41	S21-S41	S21-S41	.	
IF Carrier Frequency	Picture IFCarrier	38.9	38.9	34.5	38.9	
	Sound IF Carrier	33.4	32.4	41.0	32.9	
	Colour Sub Carrier	34.47	34.47	fDB=4.28 fDR=4.406	34.47	
CRT	25"	A59EAK71X01	Diagonally measured,Quick start,In-line-gun,Black stripe,110° degrees deflection			
	28"	A66EAK71X01				
Power Requirements		AC 180–260V , 50 Hz , 105 watts				
Antenna Input Impedance		VHF,UHF : 75 Ohm unbalanced type				
Speaker		Impedance : 8 ohm , 5W+5W(Left + Right)				

3. General Instructions

3-1. Means of Components Number Series

100 Series .... Tuner/IF/AFT/AGC processing
200 Series .... Video/Luminance processing
300 Series .... Vertical deflection
400 Series .... Horizontal deflection
500 Series .... Chroma/Peaking processing
600 Series .... Sound processing
700 Series .... Video/Chroma switching section
800 Series .... AC input, Power supply circuits
900 Series .... CRT Driver section

3-2. List of Abbreviations

This section lists all abbreviations that may used in this manual (including acronyms and units of measure) in alphabetical order, and spells out in full word or phrase what each stands for(see Table **3-1** and **3-2**).

Table **3-1** Abbreviations for Common Units of Measure

A	ampere	kW	kilowatt
AH	ampere-hour	MHz	megahertz
Å	angstrom	MV	megavolt
cm	centimeter	MW	megawatt
dB	decibel	MΩ	megaohm
dBm	decibel referenced to one milliwatt	m	meter
		µA	microampere
°C	degree Celsius	µF	microfarad
°F	degree Fahrenheit	µH	microhenry
°K	degree Kelvin	µm	micrometer
F	farad	µs	microsecond
G	gauss	µW	microwatt
GHz	gigahertz	mA	milliampere
g	gram	mg	milligram
H	henry	mH	millihenry
Hz	hertz	ml	milliliter
h	hour	mm	millimeter
in	inch	ms	millisecond
ips	inches per second	mV	millivolt
KWh	kilowatt Hour	mW	milliwatt
KG	kilogauss	Ω	ohm
Kg	kilogram	pF	picofarad
kHz	kilohertz	lb	pound
kΩ	kilohm	rpm	rotations per minute
km	kilometer	V	volt
km/h	kilometer per hour	VA	voltampere
kV	kilovolt	W	watt
kVA	kilovoltampere	Wh	watthour

Table **3-2** Common Acronyms

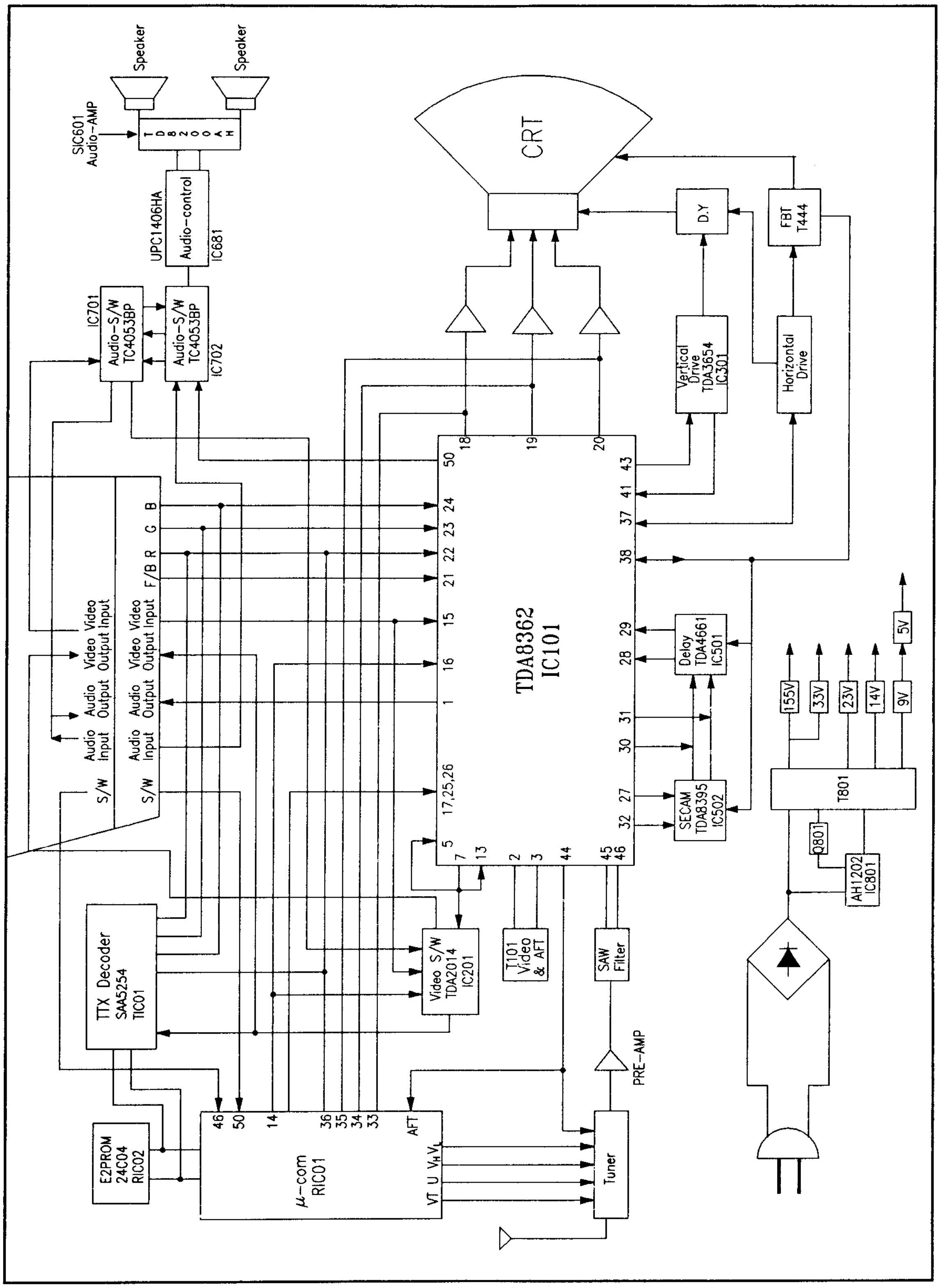
ABCL	Automatic Brightness Contrast Limiting
ABL	Automatic Beam Limiting
AC	Alternating Current
ACC	Automatic Color Control
AFC	Automatic Frequency Control
AFT	Automatic Fine Tuning
AGC	Automatic Gain Control
AM	Amplitude Modulation
APC	Automatic Phase Control
APL	Average Picture Level
AVC	Automatic Volume Control
CVBS	Composite Video Broadcast Signal
DB	Decibel
DC	Direct Current
DIP	Dual-in-Line Package
DY	Deflection York
D/A	Digital to Analog
FB	Fast Blanking
FBT	Flyback Transfomer
FM	Frequency Modulation
HDT	Horizontial Drive Transfomer
IC	Integrated Circuit
IFT	Intermediate Frequency Transfomer
LLD	Low Level Detector
LPF	Low Pass Filter
MTS	Multi Television Sound
NFB	Negative Feed Back
NTSC	National Television System Committee System
NVRAM	Non-Volatile Random Access Momory
PAL	Phase Alternating by Line System
PCM	Pulse Code Modulation
PIF	Picture Intermediate Frequency
PLL	Phase Locked Loop
PWM	Pulse Width Modulation
RAM	Random Access Memory
RF	Radio Frequency
SAW	Surface Acoustic Wave
SIF	Sound Intermediate Frequency
S/N	Signal Noise
I^2C	Inter Integrated Circuit
DAC	Digital-to-Analog Convertor
BPE	Band Pass Filter
OSD	On-Screen Display
SCL	Serial Clock Line
SDA	Serial Data Line

3-3. IC Line Up

Table **3-3** In Line Up

Loc. No.	Specification	Description	Remarks
RIC01	μ-com	TMS73C127	
RIC02	Memory	24C04A (E^2PROM)	E^2PROM
IC101	TDA8362	PAL/SECAM Decoder (VIF/SIF/VIDEO,Chroma/H-OSC,V-OSC)	
IC501	TDA4661	1-H Delay	
IC502	TDA8395	SECAM-Decoder	
TIC01	SAA5254	TTX-Decoder	
IC201	TEA2014	Video Switching	
IC701 IC702	TC4053BP	Audio Switching	
IC301	TDA3654	Vertical Output	
SIC601	TA8200AH	Audio-Amp	
IC801	AH1202	SMPS	

3-4. Chassis Block Diagram


Speaker
Speaker
SIC601
Audio-AMP
TDB200AH
UPC1406HA
Audio-control
IC681
IC701
Audio-S/W
TC4053BP
Audio-S/W
TC4053BP
IC702
CRT
D.Y
FBT
T444
Vertical
Drive
TDA3654
IC301
Horizontal
Drive
TDA8362
IC101
Delay
TDA4661
IC501
SECAM
TDA8395
IC502
T801
155V
33V
23V
14V
9V
5V
Q801
AH1202
IC801
Video Input
Video Output
Audio Output
Audio Input
S/W
B
G
R
F/B
Video Input
Video Output
Audio Output
Audio Input
S/W
TTX Decoder
SAA5254
TIC01
Video S/W
TDA2014
IC201
T101
Video
& AFT
SAW
Filter
PRE-AMP
E2PROM
24C04
RIC02
μ-com
RIC01
Tuner
46
50
14
36
35
34
33
AFT
VT
U
VH
VL
18
19
20
50
24
23
22
21
15
16
1
17,25,26
5
7
13
2
3
44
45
46
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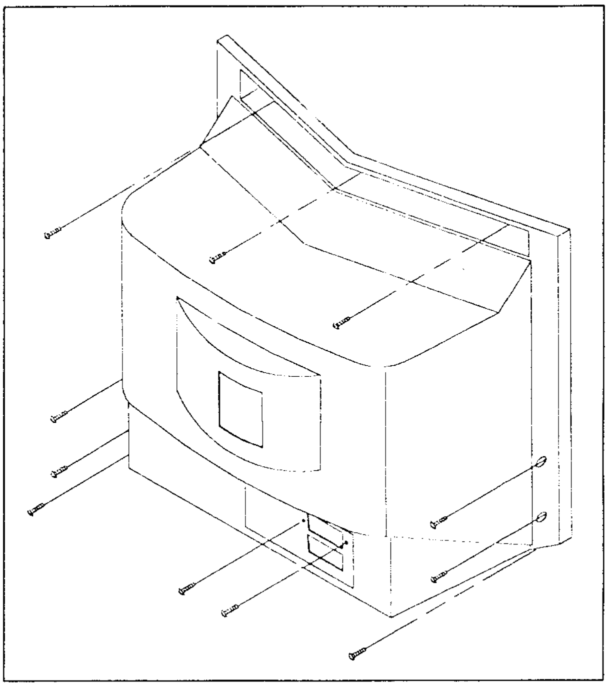
4. Disassembly Instructions

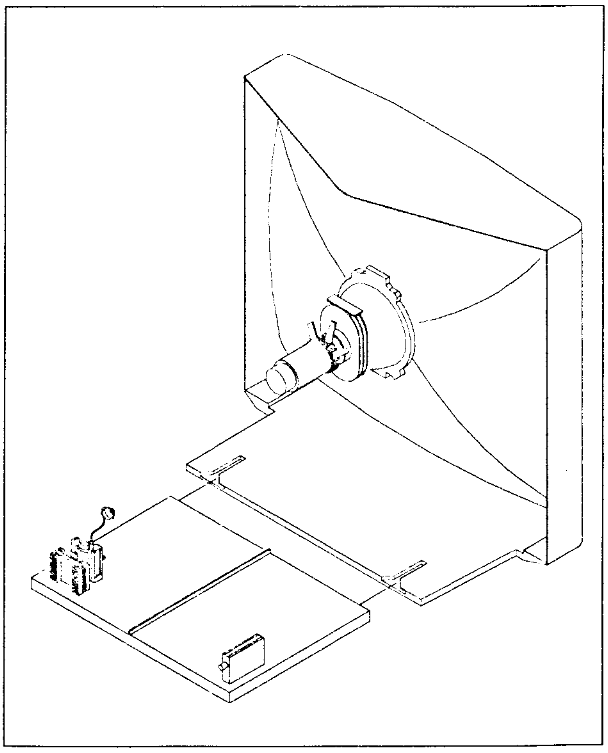
4-1. Back Cover Removal

The back cover is separated by removing 11 screws mounting the back cover to the cabinet.



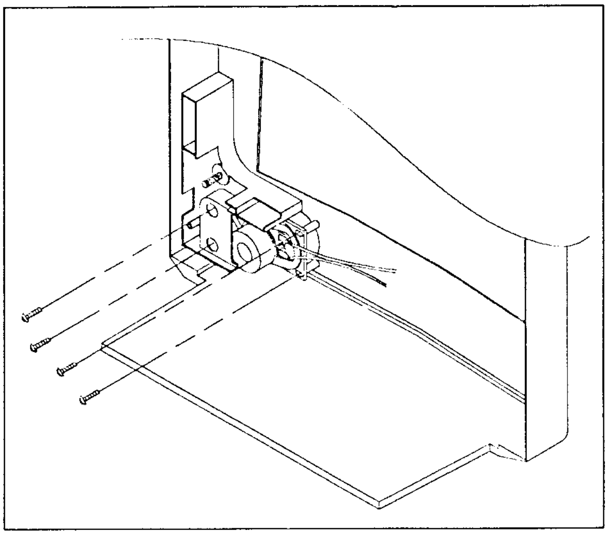
4-2. Main Board Removal

1. Carefully separate the CRT socket board from the CRT neck.
2. Remove the Anode Cap from the CRT. Because the FBT is charged with high voltage, before removing the Anode Cap, discharge the voltage through one of the heat sinks on the main board.
3. The main board will be serviceable by pulling it back slightly with both hands.



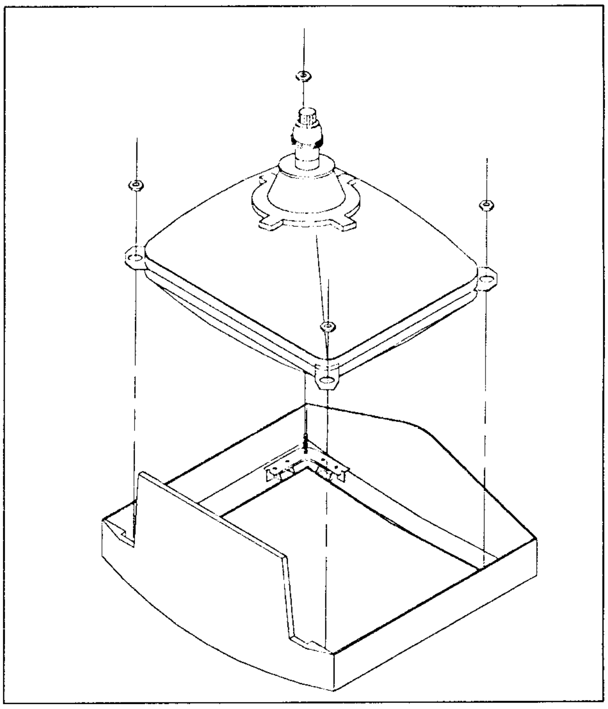
4-3. Speaker Removal

By removing 4 screws, mounting the speaker to the front cabinet, separate speaker from cabinet.



4-4. CRT Removal

1. Spread a soft mat on the floor and put the TV set face down on it.
2. Remove 4 nuts mounting the CRT to the front cabinet and lift the CRT up.
3. When lifting the CRT, take care not to damage it. Do not lift by grasping the neck.



** **Picture Tube Handling Caution** **

Due to the high vaccum and large surface area of the picture tube, great care must be exercised when handling it.

Always lift the picture tube by grasping it firmly around the faceplate.

Never Lift the Tube by grasping its Neck : The picture tube must not be scratched or subjected to excessive pressure, as fractures of the glass may result in an implosion of considerable force which can cause personal injury or property damage.

5. Alignment and Adjustments

5-1. General Instructions

1. Read the following notes before attempting alignment. Usually, a color TV-VCR will need only slight touch-up adjustment upon installation. Check the basic characteristics such as picture height, focus and horizontal and vertical sync.

Observe the picture for good black and white details; there should be no objectionable color shading. If color shading is present, demagnetize the receiver. If color shading persists, perform purity and convergence adjustments described below. This should be all that is necessary for optimum TV-VCR performance.

2. Use the specified test equipment or its equivalent.

3. Correct impedance matching is essential.

4. Avoid overload. Excessive signal from a sweep generator might overload the front-end of the TV. When inserting signal markers, do not allow the marker generator to distort the test results.

5. Connect the TV only to an AC power source with voltage and frequency as specified on the backcover nameplate.

6. Do not attempt to connect or disconnect any wires while the TV is turned on. Make sure that the power cord is disconnectd before replacing any parts.

7. To protect against shock hazard, use an isolation transformer.

5-2. Installation and Service Adjustment

5-2-1. Automatic Degaussing

A degaussing coil is mounted around the picture tube, so that external degaussing after moving the TV should be unnecessary. But the receiver must be properly degaussed upon installation. The degaussing coil operates for about 1 second after the power is switched ON. If the set is moved or turned in a different direction, the power should be OFF for at least 10 minutes.

If the chassis or parts of the cabinet become magnetized, poor color purity will result. Use an external degaussing coil. Slowly move the degaussing coil around the faceplate of the picture tube, around the sides and front of the receiver. Slowly withdraw the coil to a distance of about 6 feet before turning it OFF or disconnecting it from the AC source. If color shading still persists, perform the following Color Purity and Convergence adjustments:

5-2-2. High Voltage Check

CAUTION: There is no high voltage adjustment on this chassis. The B+ power supply (+155 volts) must be checked to ensure the correct high voltage. The check point is the D809 cathode.

1) Connect a digital voltmeter to the second anode of the picture tube.

2) Turn on the TV. Set the Brigntness and Contrast controls to minimum (zero beam current).

3) The high voltage must be about 24KV.

4) Rotate the Brightness control to both extremes. Ensure that the high voltage does not exceed the 30KV limit under any conditions.

5-2-3. Horiziontal Phase Adjustment

To move the center of picture, adjust Horizontal Phase control(VR401).

5-2-4. Vertical Height and Location Adjustment

The Size Control(VR301) on the main board changes the size of the picture; adjusting it will simultaneously affect the top and bottom. Adjust the Vertical Location control (VR302) for the proper vertical location.

5-2-5. Screen Adjustment

1) Tune in an active channel.

2) Adjust the screen control for a normal picture (no blooming or flyback line).

5-2-6. Focus Adjustment

Adjust the Focus control (on FBT) for well defined scanning lines in the center area of the screen.

5-2-7. R-F AGC Adjustment

1) Tune the set in the strongest-signal station available.

2) Turn the AGC control (VR101) on the IF board fully clockwise opsition.

3) Adjust the AGC control until noise (snow) dissappears from the screen.

5-2-8. White Balance Adjustment

1) Preparation

   a) Operate the receiver for at least 20 minutes before attempting the white balance adjustment.

   b) Input a black and white tint pattern.

   c) Set the Colour controls to the center position. Set the Brightness and Contrast controls to the maximum.

   d) Set the Red, Blue and Green Low-Light controls to center.

   e) Set the Blue and Red Drive Controls to center.

   f) Set the Screen VR Control (on FBT) to the minimum position (fully counter-clockwise).

   g) Connect V/F to 8V and V/B to GND in CN402.

2) Adjustment Steps

   a) Rotate the Screen control (T444) gradually clockwise until the first horizontal line appears slightly on the screen.

   b) Adjust the two Cut-Off Controls to obtain the slightly lighted horizontal line in the same levels of three colours(red,green, blue). The line looks like white when the Cut-Off Controls are adjusted properly.

   c) Reset CN402 on the Main Board to obtain a raster ("NORMAL" Position).

   d) Adjust the Blue and Red Drive Controls to obtain a white-balanced picture in the high light areas.

   e) Set the Contrast Control to minimum, and turn the Brightness Control slightly counter-clockwise to obtain a dark gray raster. Check the white balance in low brightness. If necessary, repeat steps a)-d) for the correct white balance.

5-2-9. AFT Adjustment

1) Equipment

   –Pattern Generator (PM5518)
   –Digital Voltmeter

2) Preparation

   a) Set the supply voltage to AC 220V.

   b) Set the RF output frequency to 38.9MHz Multi-burst.

   c) Connect the RF out of PM5518 to the Tuner's Pin (IF).

   d) Connect the DC voltmeter to D101(-).

   e) Adjust the DC voltage of D101(-) tape 4V by varying T101.

5-3. Semiconductor Base Diagrams

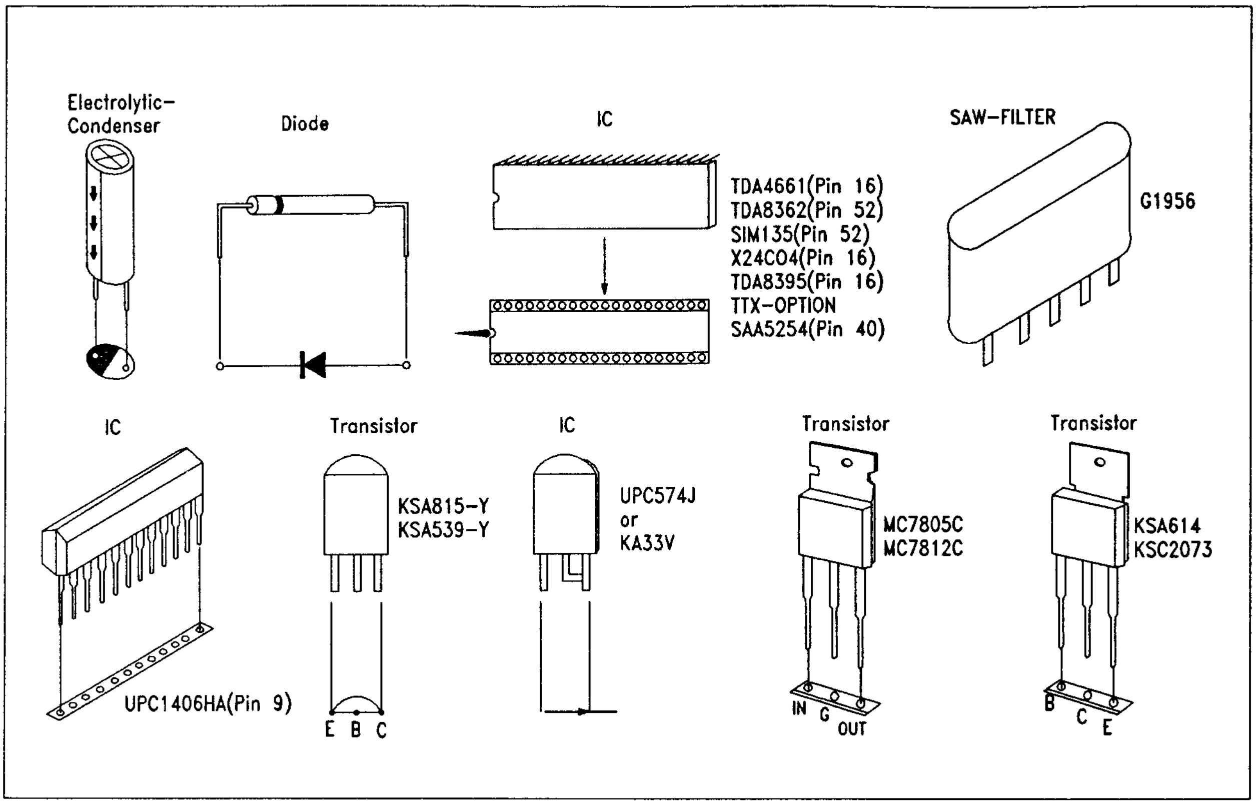

Electrolytic-
Condenser
Diode
IC
TDA4661(Pin 16)
TDA8362(Pin 52)
SIM135(Pin 52)
X24C04(Pin 16)
TDA8395(Pin 16)
TTX-OPTION
SAA5254(Pin 40)
SAW-FILTER
G1956
IC
UPC1406HA(Pin 9)
Transistor
KSA815-Y
KSA539-Y
E B C
IC
UPC574J
or
KA33V
Transistor
MC7805C
MC7812C
IN G OUT
Transistor
KSA614
KSC2073
B C E

Fig. 5-1 Semiconductor Base Diagrams

6. Power Supply Section

6-1. SMPS(AH1202) Block Diagram

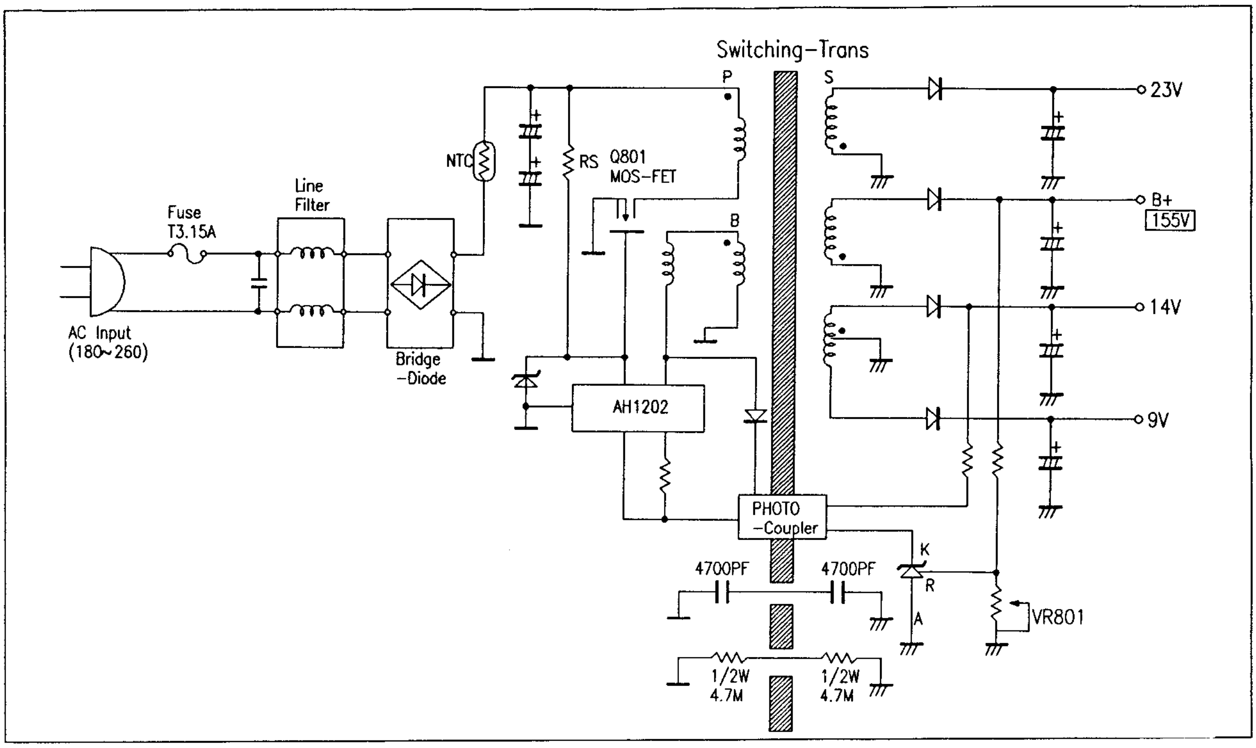

Switching-Trans
P
S
B
23V
B+
155V
14V
9V
NTC
RS
Q801
MOS-FET
Line
Filter
Fuse
T3.15A
AC Input
(180~260)
Bridge
-Diode
AH1202
PHOTO
-Coupler
4700PF
4700PF
K
R
A
VR801
1/2W
4.7M
1/2W
4.7M

Fig. 6-1 SMPS(AH1202) Block Diagram

6-2. Operating Description of AH1202

6-2-1. Overview

The power supply delivers output power up to 160W maximum; the input voltage ranges from AC 180 to AC 160 volts.
The output voltage of the secondary winding is controlled by varying the oscillation frequency and duty cycle of the primary voltage.

6-2-2. AH1202 Description

The internal block diagram of AH1220 is shown in **Fig.6-1**. It consists of the following:

- Capacitor & resistor driving gate for MOSFET.

- Two Amps, reference voltage sources and power gain control circuit.

6-2-3. Operating Description (Refer to Operating Waveform & Internal Block Diagram)

Current flows through the gate of switching MOSFET(Q801) to Q801. This voltage is fed to P winding of Transformer as well as Base; Q801 is ON.

When the voltage at S winding is opposite the polarity of rectifier diode D, current does not flow. Accordingly, only the excitation current of the transformer flows through P winding, and this current increases in proportion to the drive current I_D. The gate voltage does not maintain the saturation of Q801 due to the increase, of I_D; V_{DS} increases, the voltages of P winding & B winding decrease and Q801 rapidly turns off. Energy is stored when Q801 is ON. When Q801 is off, ringing occurs at each winding. Q801 turns ON, and oscillation continues.

6-2-4. Operating Waveforms

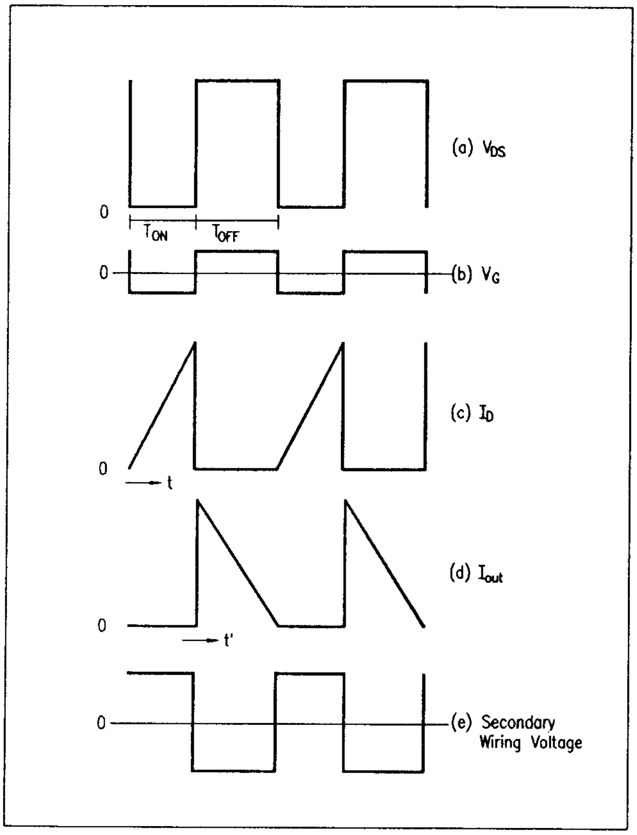


Fig. 6-2 Operating Waveforms

6-2-5. AH1202 Internal Block Diagram

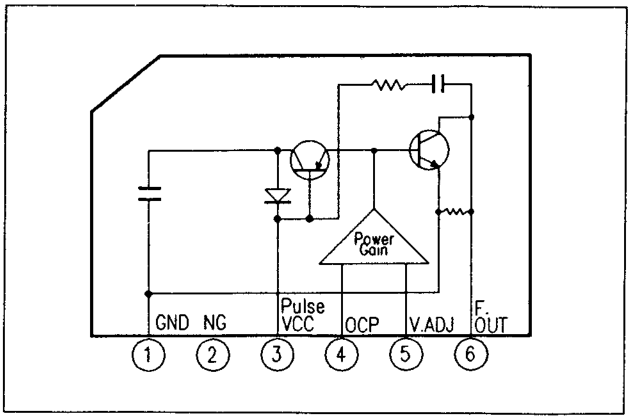

Power Gain
GND
NG
Pulse VCC
OCP
V.ADJ
F. OUT
①
②
③
④
⑤
⑥

Fig. 6-3 AH1202 Internal Block Diagram

7. Chroma, Video, IF, Sound, Deflection Section

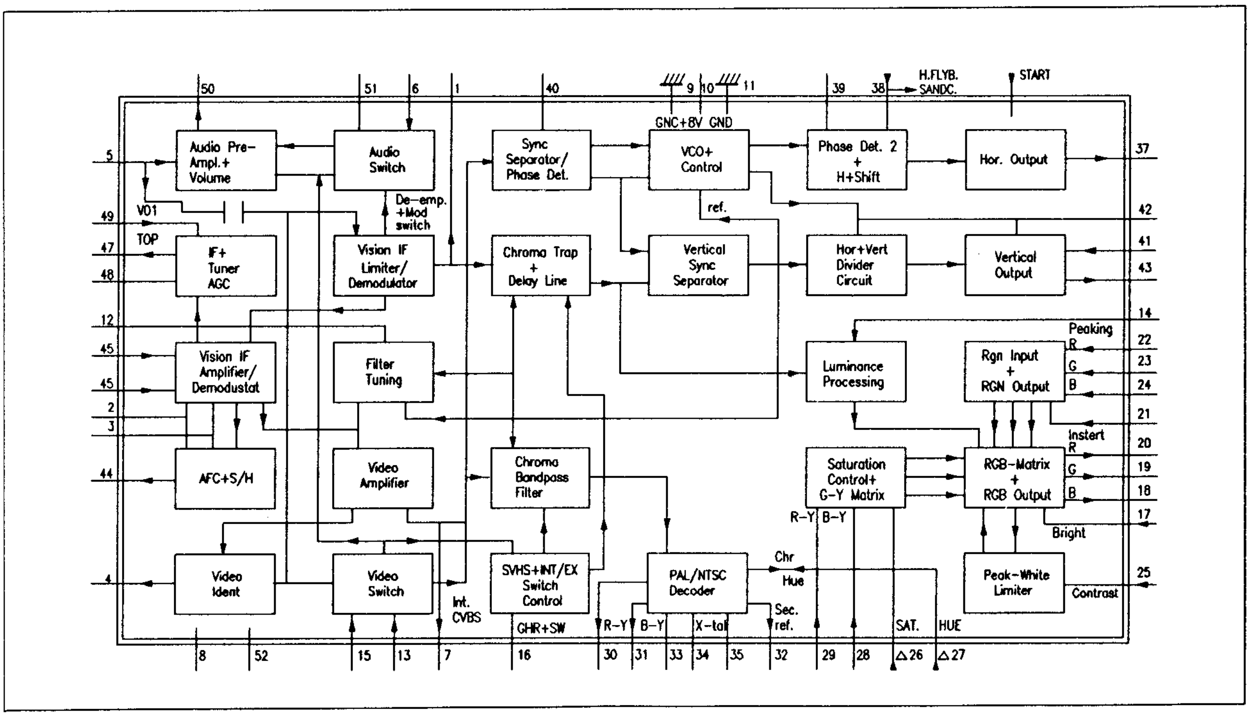
7-1. IC Specification(TDA8362)

7-1-1. Introduction

1) General Description

- Video IF amplifier, video demodulator, video amplifier, AGC and AFC (suitable for negative modulation).
- Sound limiter, demodulator and amplifier with volume control.
- Inputs and switches for external audio and CVB(Composite Video Broadcast) signals.
- Synchronization circuit with drive circuits for horizontal and vertical deflection.
- Seperation of the horizontal oscillator from the main rectifier.
- X-ray protection (combined with the 2nd phase detector pin).
- PAL/NTSC colour decoder in which the chroma filters (bandpass and trap) and the luminance delay line are integrated. The circuit has a seperate chroma input, and the filters can be switched-off so that S-VHS signals (via an external switch) can be applied to the IC.
- Peaking circuit in the luminance channel.
- RGB-output circuit with linear inputs for On-Screen Display.
- The supply voltage for the IC is 8 volts. It is mounted in an S-DIL envelope with Pin 52.
- Multi-standard FM sound demodulator(4.5MHz to 6.5MHz).
- Video and audio switches (CVBS int/ext, S-VHS and audio int/ext).
- RGB-control circuit with linear RGB inputs and fast blanking.
- Intergrated chroma trap and bandpass filters(auto-calibrated).

7-1-2. Block Diagram and Pin Function



50
51
6
1
40
9
10
11
GNC+8V GND
39
38
H.FLYB.
SANDC.
START
Audio Pre-Ampl.+ Volume
Audio Switch
Sync Separator/ Phase Det.
VCO+ Control
Phase Det. 2 + H+Shift
Hor. Output
5
37
49
V01
De-emp. +Mod switch
ref.
42
47
TOP
IF+ Tuner AGC
Vision IF Limiter/ Demodulator
Chroma Trap + Delay Line
Vertical Sync Separator
Hor+Vert Divider Circuit
Vertical Output
41
43
48
12
14
Peaking
45
45
Vision IF Amplifier/ Demodustat
Filter Tuning
Luminance Processing
Rgn Input + RGN Output
R
G
B
22
23
24
2
3
21
Instert
R
20
44
AFC+S/H
Video Amplifier
Chroma Bandpass Filter
Saturation Control+ G-Y Matrix
RGB-Matrix + RGB Output
G
B
19
18
17
R-Y
B-Y
Bright
4
Video Ident
Video Switch
SVHS+INT/EX Switch Control
PAL/NTSC Decoder
Chr
Hue
Peak-White Limiter
25
Contrast
Int. CVBS
GHR+SW
R-Y
B-Y
X-tal
Sec. ref.
SAT.
HUE
8
52
15
13
7
16
30
31
33
34
35
32
29
28
△26
△27

Fig. 7-1 Block Diagram

Table 7-1 Pin Function			
Pin No.	**Function**	**Pin No.**	**Function**
1	Audio deemphasis	52	Decoupling bandgap supply
2	IF-demodulator tuned circuit	51	Decoupling sound demodulator
3	IF-demodulator tuned circuit	50	Audio output
4	Video indentification output	49	Tuner take-over adjustment
5	Sound IF in plus volume control	48	AGC decoupling capacitor
6	External audio input	47	Tuner AGC coutput
7	IF video output	46	IF-input
8	Decoupling digital supply	45	IF-AFC output
9	Ground	44	AFC output
10	Positive supply(8V)	43	Vertical output
11	Ground	42	Vertical ramp generator
12	Decoupling filter tuning	41	Vertical feedback input
13	Internal CVBS input	40	ϕ-1 loop filter
14	Peaking control input, Sync ident	39	ϕ-1 loop filter
15	External CVBS input	38	Flyback input/sandcastle output
16	Chroma+A/V switch input	37	Horizontal output
17	Brightness control input	36	Start horizontal oscillator
18	B-output	35	4.43MHz X-tal connection
19	G-output	34	3.58MHz X-tal connection
20	R-output	33	Loop filter burst phase detector
21	RGB-insertion and blanking input	32	4.43MHz output for TDA8395
22	R-input for insertion	31	B-Y output signal
23	G-input for insertion	30	R-Y output signal
24	B-input for insertion	29	R-Y input signal
25	Contrast control input	28	B-Y input signal
26	Saturation control input	27	Hue control input(or chroma out)

7-2. Chroma Video Section

7-2-1. Block Diagram

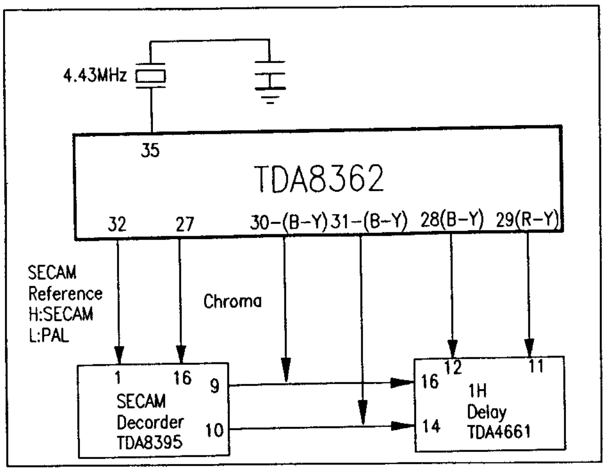

4.43MHz
35
TDA8362
32
27
30-(B-Y)
31-(B-Y)
28(B-Y)
29(R-Y)
SECAM
Reference
H:SECAM
L:PAL
Chroma
1
16
9
SECAM
Decorder
TDA8395
10
12
11
16
1H
Delay
TDA4661
14

Fig. 7-2 Block Diagram

7-2-2. Operating Description

1) Colour Decoder

The colour decoder contains an alignment-free X-tal oscillator,a dual killer circuit and the colour difference signal demodulators. The decoder adapts automatically for PAL and NTSC signals. Two X-tal pins are present so no external switching is required. The SECAM add-on decoder TDA8395, makes possible an alignment free multi-standard decoder.

2) PAL/SECAM :

In this application Pin 27 is not used for Hue-control, but for the chroma signal to the SECAM add-on circuit. Pin 27 is connected to the supply line (8V) via a series 10K resistor. The burst phase detector locks the X-tal oscillator with the burst signal. Two gain modes provide an increased capture range when the PLL is unlocked, and a low ripple voltage and good noise immunity when the PLL is locked. The burst phase detector operates during the burst key period only, to prevent the PLL from disturbance caused by the chroma signal. The Killer circuit switches off the R-Y and B-Y demodulators at the too-low input condition (burst amplitude).

7-2-3. IC Block Diagram(TDA8362)

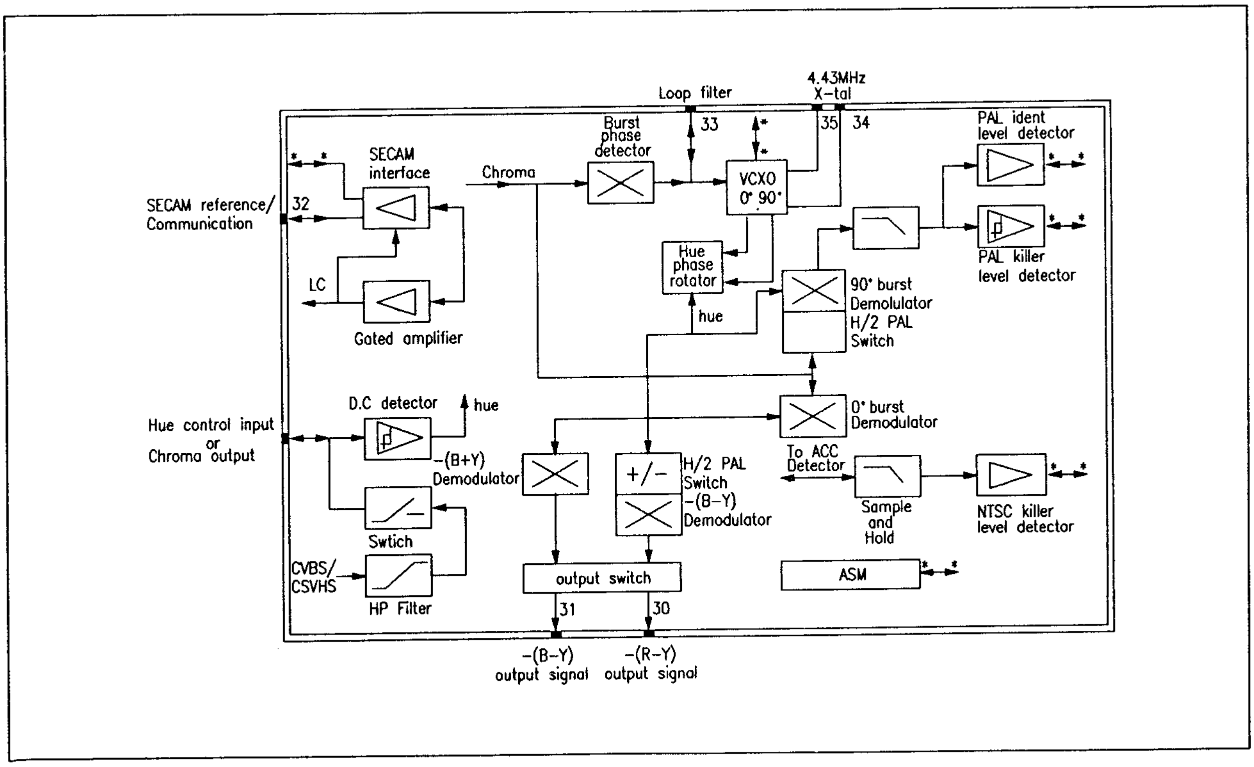

4.43MHz
X-tal
Loop filter
Burst
phase
detector
33
35
34
PAL ident
level detector
SECAM
interface
Chroma
VCXO
0° 90°
SECAM reference/
Communication
32
Hue
phase
rotator
PAL killer
level detector
LC
90° burst
Demolulator
H/2 PAL
Switch
hue
Gated amplifier
D.C detector
hue
0° burst
Demodulator
Hue control input
or
Chroma output
-(B+Y)
Demodulator
+/-
H/2 PAL
Swich
-(B-Y)
Demodulator
To ACC
Detector
Sample
and
Hold
NTSC killer
level detector
Swtich
CVBS/
CSVHS
HP Filter
output switch
ASM
31
30
-(B-Y)
output signal
-(R-Y)
output signal

Fig. 7-3 IC Block Diagram

7-2-4. IC Specification(TDA8395)

1) Introduction

The TDA8395 is an alignment-free SECAM colour decoder used in conjunction with the TDA8362. It includes the Cloche filter, demodulator and Indentification circuit. The TDA8395 application needs very few external components. Deemphasis is internally calibrated.

The Cloche filter is a gyrator-capacitor type filter; its resonance frequency is controlled during the calibration period, and offset during scan for the connect resonance frequency. The required reference frequency for calibration must be connected at Pin 1 and is obtained from TDA8362 (Pin 32).

The two(or three)-level sandcastle pulse has to be connected at Pin 15(TDA8362 Pin 38) and is used for blanking periods; it provides the clock information for the identfication circuit.

The chroma signal (Pin 16) is connected to Pin 27 of TDA8362; it is demodulated by a PLL circuit which uses the reference frequency and a bandgap reference to force the PLL to the desired demodulation characteristic. Digital line identification checks the incoming signal for SECAM. If SECAM is detected, Pin 1 will sink a current of 150μA; the voltage at this pin will be high(5.5V), and the colour difference signal outputs will be switched on. These outputs will be disconnected when no SECAM is detected for two frame periods; the demodulator will be initialized before trying again.

2) Block Diagram

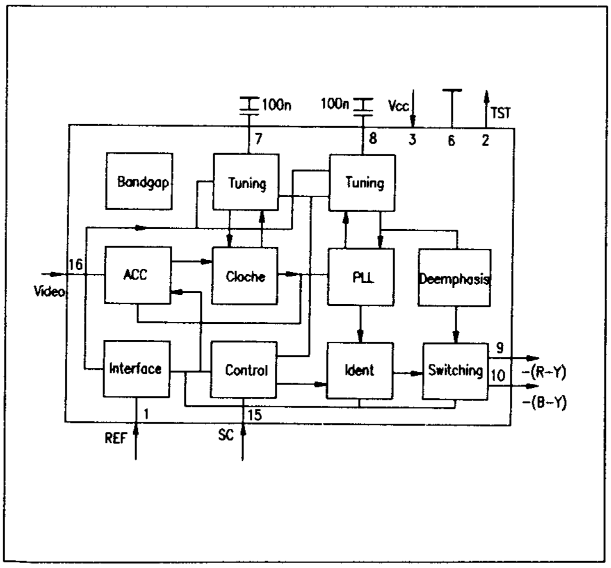


Fig. 7-4 Block Diagram

3) Pin Function

Table 7-2 Pin Function

Pin No.	Symbol	Function
1	Free/IDENT	reference frequency input/identification input
2	TEST	test output
3	Vp	positive supply voltage
4	n.c.	not connected
5	n.c.	not connected
6	GND	ground
7	CLOCHEref	Cloche reference filter
8	PLLref	PLL reference
9	-(R-Y)	-(R-Y) output
10	-(B-Y)	-(B-Y) output
11	n.c.	not connected
12	n.c.	not connected
13	n.c.	not connected
14	n.c.	not connected
15	SAND	sancastle pulse input
16	CVBS	video(chrominance)input

7-2-5. IC Specification(TDA4661)

1) Introduction

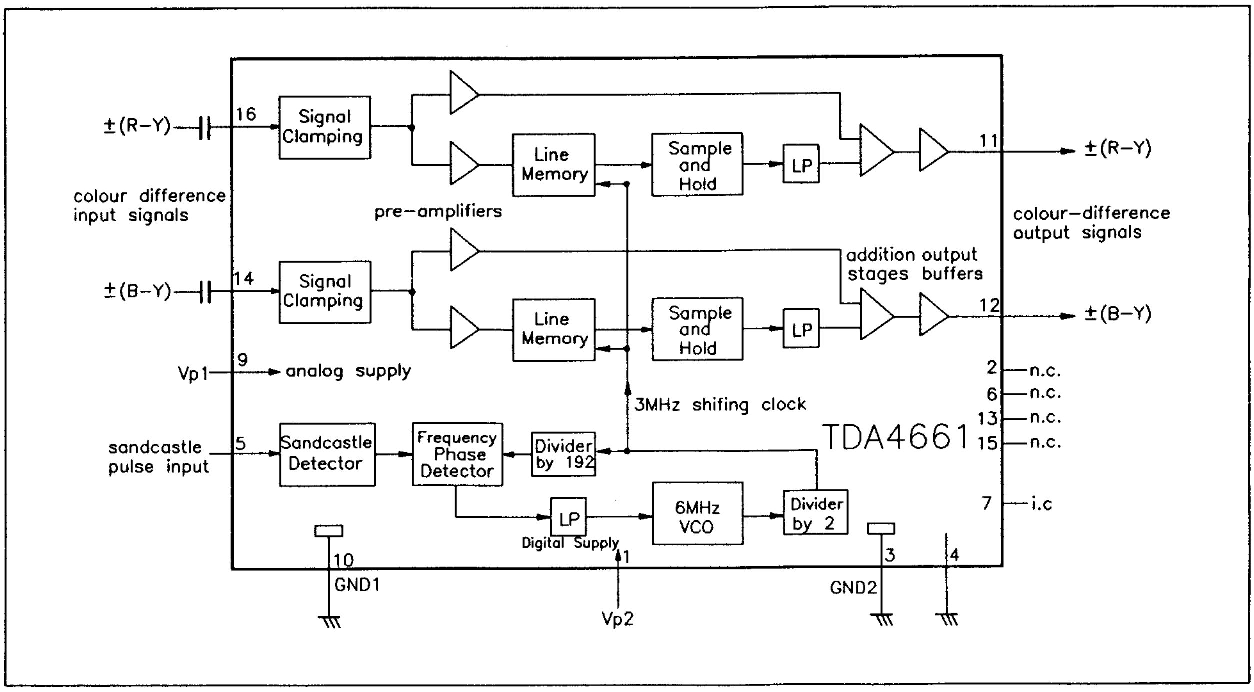
The TDA4661 integrates the baseband delay lines (64μS) for colour television receivers. It can be connected to the TDA8362 and TDA8395 without switches and alignments. The TDA4661 consists of two main blocks:

-Two comb filters with a delay time of 64μsec (switched capacitor technique).

-An internal 3MHz clock which is line locked via the sandcastle pulse.

The TDA4661 operates according to the mode demanded by the colour transmission standard. In the PAL mode it operates as a geometric adder to satisfy the requirements of PAL demodulation; in the NTSC mode it reduces the cross-colour interference(comb-filtering) and in the SECAM mode the delay line repeats the colour difference signal on consecutive horizontal scan lines. The colour difference siganls are AC-coupled to Pins 14 and 16, and clamped by the input stages. The internal clock drives the delay lines to obtain the required 64μsec. The clock pulses are derived from a 6MHz Current Controlled Oscillator which is locked via a PLL with the sandcastle pulse (connected at Pin 5). Sample-and-hold low pass filters suppress the clock signal. The delayed and the undelayed signals are added, buffered and fed to the output (Pins 11 and 12).

2) Block Diagram



±(R-Y)
colour difference input signals
±(B-Y)
Vp1
sandcastle pulse input
16
14
9
5
Signal Clamping
Signal Clamping
pre-amplifiers
Line Memory
Line Memory
Sample and Hold
Sample and Hold
LP
LP
analog supply
3MHz shifing clock
Sandcastle Detector
Frequency Phase Detector
Divider by 192
LP
6MHz VCO
Divider by 2
Digital Supply
TDA4661
addition output stages buffers
11
12
2
6
13
15
7
n.c.
n.c.
n.c.
n.c.
i.c
±(R-Y)
colour-difference output signals
±(B-Y)
10
GND1
1
Vp2
3
4
GND2

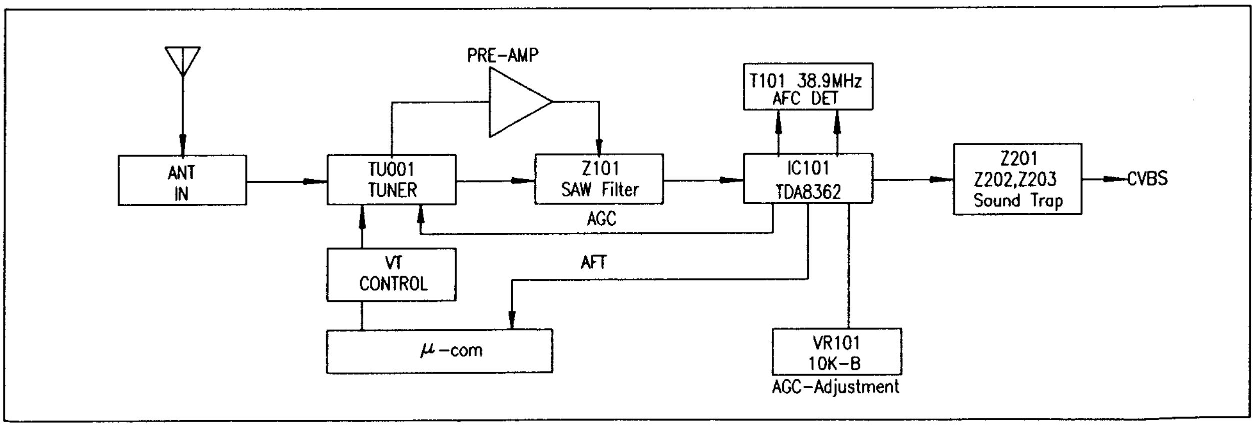
Fig. 7-5 Block Diagram

Table 7-3 Pin Function

Pin No.	Symbol	Function	Pin No.	Symbol	Function
1	Vp2	+8V Supply Voltage for analogue part	9	Vp1	+8V Supply Voltage for analogue part
2	n.c.	not connected	10	GND1	ground for analog part(0V)
3	GND2	ground for digital part(0V)	11	Vo(R-Y)	±(R-Y) output signal
4	i.c.	internally connected	12	Vo(B-Y)	±(B-Y) output signal
5	SAND	Sandcastle pulse input	13	n.c.	not connected
6	n.c.	not connected	14	Vi(B-Y)	±(B-Y) input signal
7	i.c.	internally connected	15	n.c.	not connected
8	i.c.	internally connected	16	Vi(R-Y)	±(R-Y) input signal

7-3. IF Section

7-3-1. Block Diagram



ANT IN
PRE-AMP
TU001 TUNER
Z101 SAW Filter
T101 38.9MHz AFC DET
IC101 TDA8362
Z201 Z202,Z203 Sound Trap
CVBS
AGC
VT CONTROL
AFT
μ-com
VR101 10K-B
AGC-Adjustment

7-3-2. IF Circuit Description

1) IF amplifier

The IF-amplifier contains 3 AC-coupled control stages with total gain exceeding 60dB. The reference carrier for the video demodulator is obtained by means of passive regeneration of the picture carrier. The external reference tuned circuit is the only remaining adjustment on the IC. The polarity of the demodulator can be switched so that the circuit is suitable for both positive and negative modulated signals.
The AFC-circuit is driven with the same reference signal as the video demodulator.
A sample-and-hold circuit prevents the video content from disturbing the AFC; the Capacitor for this function is internal. The AFC output voltage is 6 Volts maximum.

The AGC-detector operates on top-sync or top white-level depending on the status of the demodulator. The AGC detector time-constant capacitor(C117) is connected externally(Pin 48). The time-constant of the AGC system during positive modulation is designed to avoid visible variations of the signal amplitude. The AGC includes a circuit which detects whether the AGC detector is activated every frame period.

The time constant capacitor(C117) is connected externally at Pin 48. For positive modulated signals the AGC time constant designed to avoid visible variation of the video output signal.

To obtain an acceptable AGC speed with positive modulation, an extra circuit checks whether the AGC detector is activated every frame period.

The speed will be increased if this circuit detects that the video output signal nas hot reached 80% of peak white level for approximately 100mS.
The tuner AGC take-over point can be set by adjusting the DC-voltage Pin 49 with a potentiometer of 10KΩ (VR101).

The IF contains a video identification circuit which is independent of the synchronization circuit. Therefore, search tuning is possible when the display section of the receiver is used as a monitor. The ident output voltage is low when no transmitter is identified; in that condition the sound demodulator is switched off (mute function). When a transmitter is identified, the voltage is high. The voltage level is dependent on the frequency of the incomig chroma signal.

The tuner AGC (Pin 47) is an open collector output stage with an output swing of 2mA/min. The AFC circuit is driven by the same reference signal as the video demodulator. A sample and hold circuit avoids video break-through from the video demodulator to the AFC voltage. The AFC slope is controlled by resistors R114 and R115.

7-3-3. Block Diagram(TDA8362)

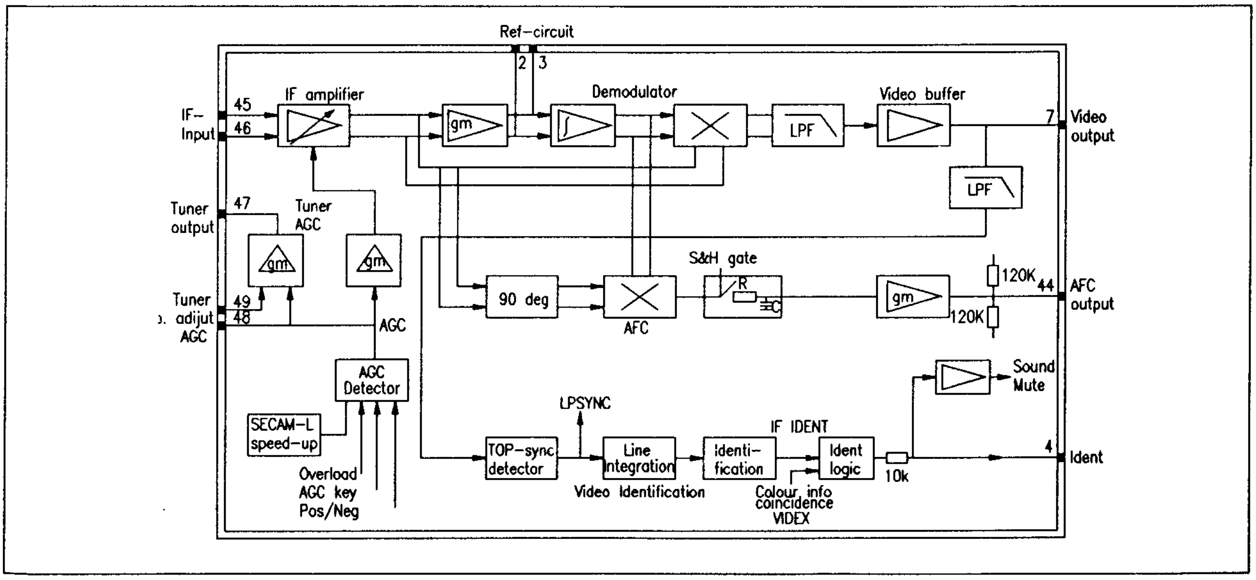

Ref–circuit
2
3
IF–
Input
45
46
IF amplifier
gm
Demodulator
LPF
Video buffer
7
Video
output
LPF
Tuner
output
47
Tuner
AGC
gm
gm
Tuner
). adijut
AGC
49
48
AGC
90 deg
AFC
S&H gate
R
C
gm
120K
44
120K
AFC
output
AGC
Detector
SECAM–L
speed–up
Overload
AGC key
Pos/Neg
LPSYNC
Sound
Mute
IF IDENT
TOP–sync
detector
Line
Integration
Identi–
fication
Ident
logic
10k
4
Ident
Video Identification
Colour info
coincidence
VIDEX

Fig. 7-6 Block Diagram(TDA8362)

7-4. Sound Section

7-4-1. Block Diagram

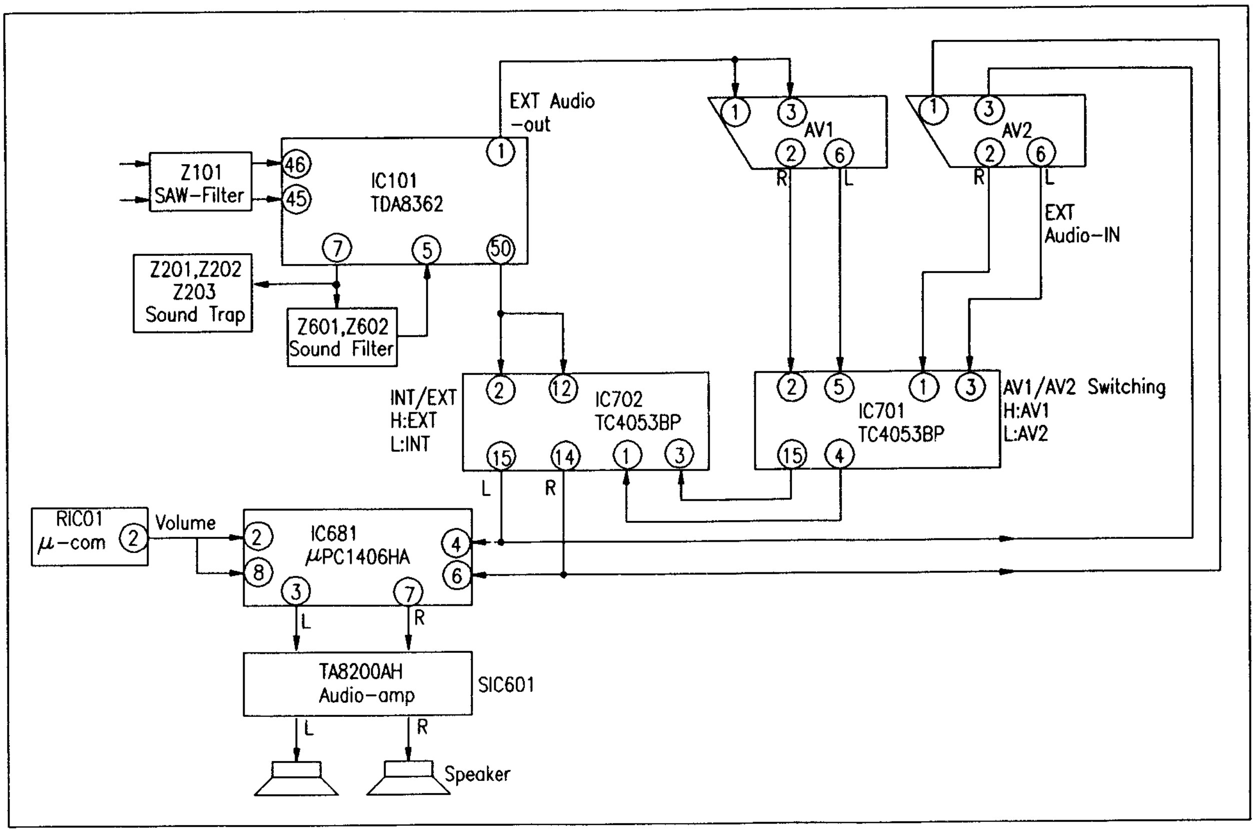

Z101
SAW-Filter
46
45
IC101
TDA8362
1
7
5
50
EXT Audio
-out
Z201,Z202
Z203
Sound Trap
Z601,Z602
Sound Filter
AV1
1
3
2
6
R
L
AV2
1
3
2
6
R
L
EXT
Audio-IN
INT/EXT
H:EXT
L:INT
IC702
TC4053BP
2
12
15
14
1
3
L
R
IC701
TC4053BP
2
5
1
3
15
4
AV1/AV2 Switching
H:AV1
L:AV2
RIC01
μ-com
2
Volume
IC681
μPC1406HA
2
8
4
6
3
7
L
R
TA8200AH
Audio-amp
SIC601
L
R
Speaker

Fig. 7-7 Block Diagram

7-4-2. IC Block Diagram(TDA8362)

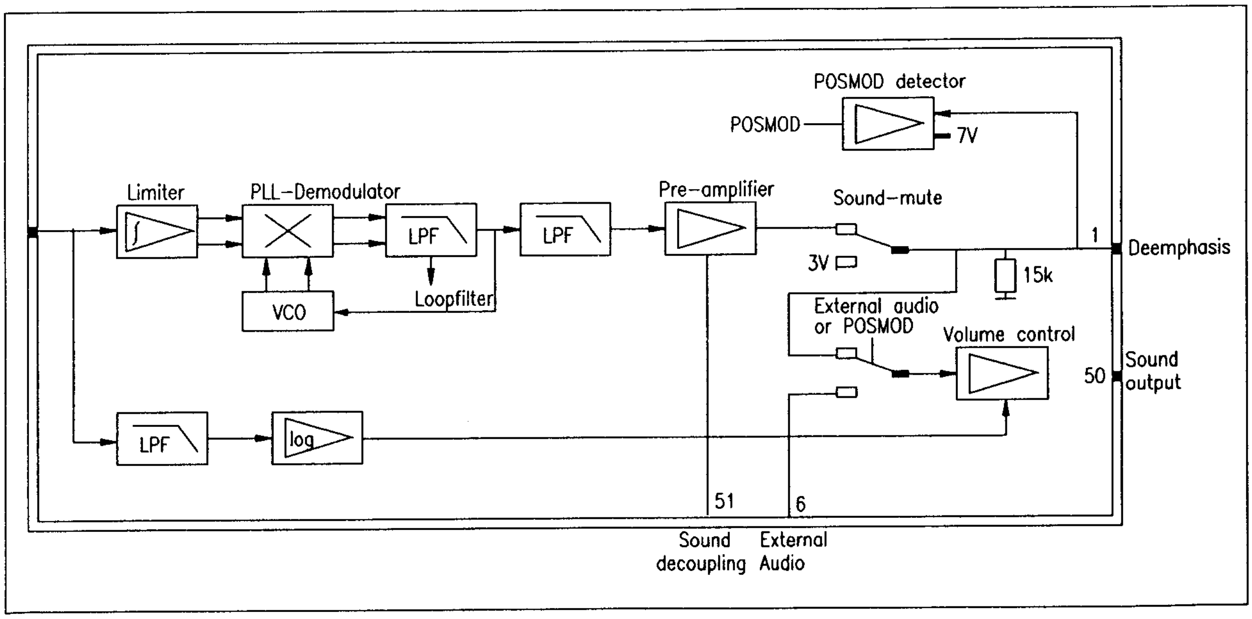

POSMOD detector
POSMOD
7V
Limiter
PLL-Demodulator
LPF
LPF
Loopfilter
VCO
Pre-amplifier
Sound-mute
3V
1
Deemphasis
15k
External audio
or POSMOD
Volume control
50
Sound
output
LPF
log
51
6
Sound
decoupling
External
Audio

Fig. 7-8 Block Diagram

7-4-3. Sound Circuit Description

The sound bandpass and trap filters are connected externally. The sound signal (5.5MHz, 6.0MHz) passes through Z601 and Z602 sound filters and is fed into Pin 5 of TDA8362. This sound signal outputs through Pin 50 by the internal audio switch, according to IC702 (H:AV, L:TV).

If Pins 10 and Pin 11 are low, the sound signal outputs through Pins 50 of TDA8362, and is fed to Pins 2 and Pin 12. The sound signal outputed through Pins 14 and Pin 15 and feeds Pin 4 and Pin 6 in IC681(Volume Control IC).

The output sound signal can be adjusted by volume control voltage from Pin 2 in μ-com(RIC01). The signal from Pin 3 and Pin 7 in IC681 outputs to speaker through SIC601 (AUDIO-AMP).

7-5. IF Block Diagram(TDA8362)

7-5 -1. Block Diagram

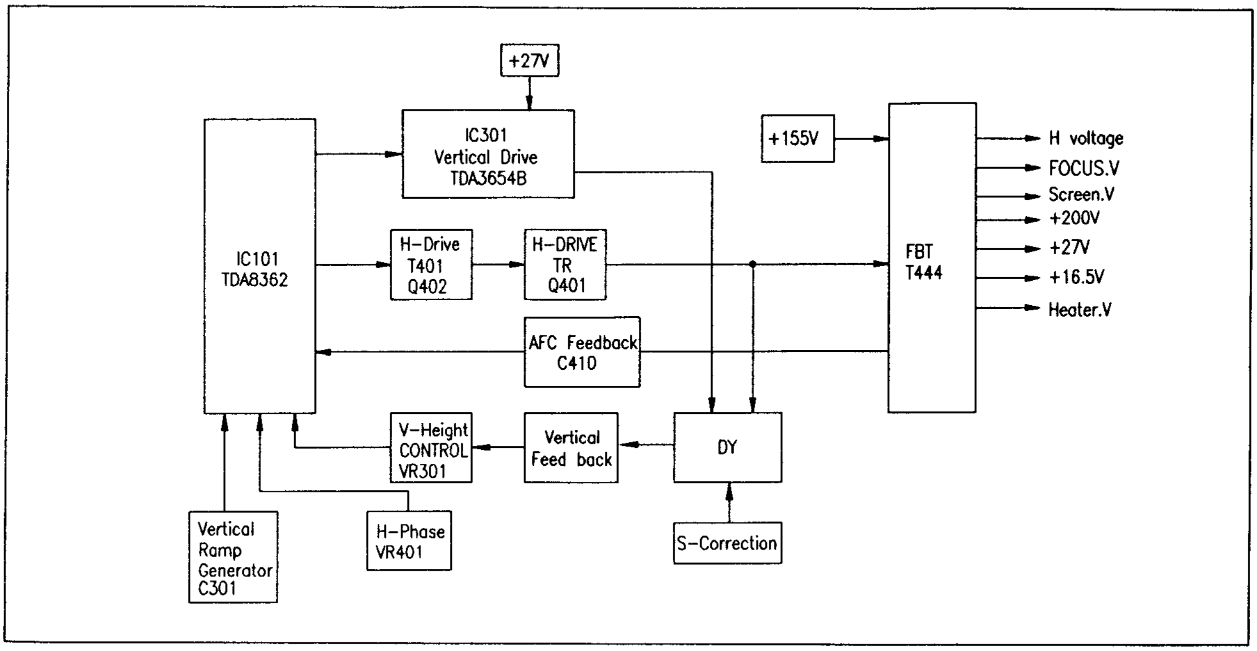

+27V
IC301
Vertical Drive
TDA3654B
+155V
H voltage
FOCUS.V
Screen.V
+200V
+27V
+16.5V
Heater.V
IC101
TDA8362
H-Drive
T401
Q402
H-DRIVE
TR
Q401
FBT
T444
AFC Feedback
C410
V-Height
CONTROL
VR301
Vertical
Feed back
DY
Vertical
Ramp
Generator
C301
H-Phase
VR401
S-Correction

Fig. 7-9 Block Diagram of TDA8362

7-5-2. Sync Circuit Description

The incoming video signals, Pin 13 for the internal signal and Pin 15 for an external CVBS signal, are fed to the sync separator circuit. Internally the black level and the top sync level are detected. Next the sync pulses are amplified to a fixed level and sliced at 50%.The separated sync pulses are fed to the first phase detector and the coincidence detector. The components which determine the loop gain of the first phase detector are connected at Pin 40(C401, C402 and VR401). The coincidence detector is only used to detect whether the line oscillator is synchronized, not for transmitter identification.

The line oscillator is runing at twice at the line frequency, and is derived from the X-tal oscillator frequency of the colour decoder. Consequently, no adjustment is required. The free-running frequency has a maximum deviation of 2% compared to the nominal frequency. The second phase detector generates the pulse for the horizontal driver stage(Pin 37).

The loop filter capacitor C403 is connected to Pin 39. Horizontal shift is obtained by a potentiometer and series resistor R402 and VR401) connected to Pin 39. The TDA8362 has a separate start-up circuit for the horizontal oscillator(Pin 36). When this feature is used for starting horizontal deflection, the resistor connected at the base of the horizontal driver transistor(Q401) must be connected to the start supply as well (Pin 37 is an open collector). For applications which do not require a start-up function, Pin 36 must be connected to the main supply voltage(8V). The vertical drive pulses (Pin 43) are generated by a divider circuit. The vertical ramp generator components are connected to Pin 42. Capacitor C301 is charged via two resistors. One resistor is connected to a stabilized supply voltage R301; in this way the vertical amplitude will be kept constant with different picture contents. AC and DC feedback voltage from the vertical deflection stage are connected to Pin 41.

7-5 -3. IC Block Diagram(TDA8362)

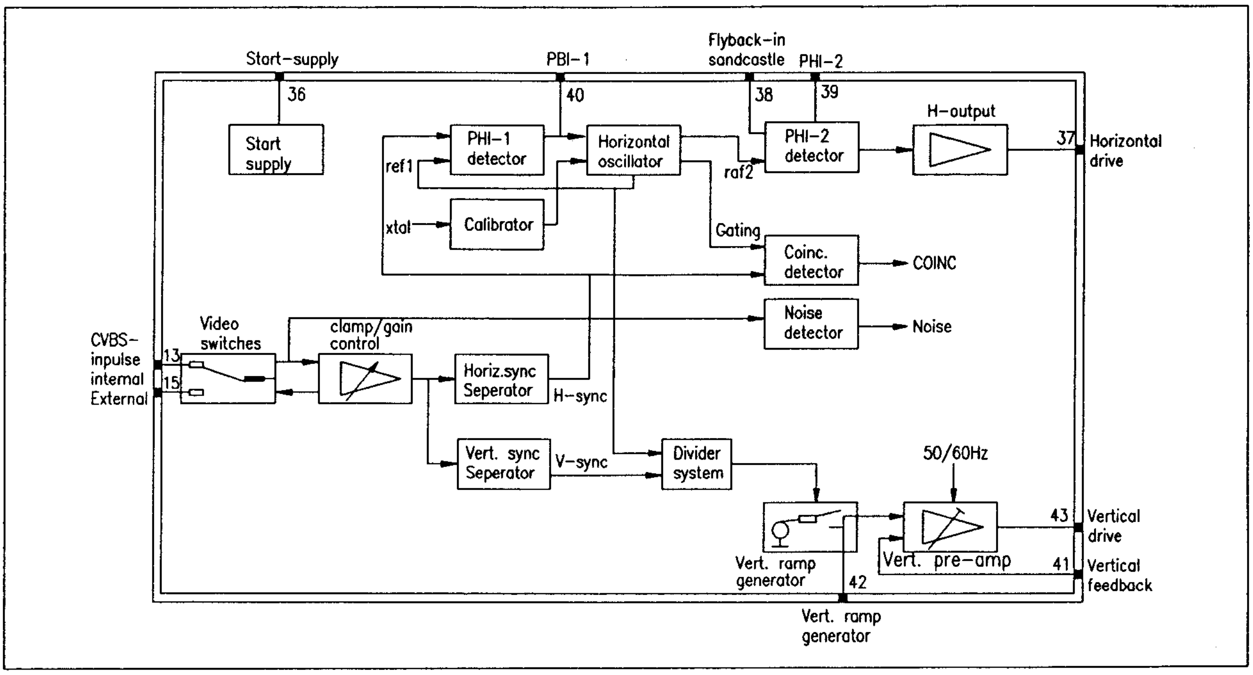

Start-supply
PBI-1
Flyback-in sandcastle
PHI-2
36
40
38
39
H-output
Start supply
PHI-1 detector
Horizontal oscillator
PHI-2 detector
37
Horizontal drive
ref1
raf2
xtal
Calibrator
Gating
Coinc. detector
COINC
Noise detector
Noise
Video switches
clamp/gain control
CVBS-inpulse internal External
13
15
Horiz.sync Seperator
H-sync
Vert. sync Seperator
V-sync
Divider system
50/60Hz
43
Vertical drive
Vert. ramp generator
Vert. pre-amp
41
Vertical feedback
42
Vert. ramp generator

Fig. 7-10 Block Diagram of TDA8362

7-4. IC Specification(TDA3654)

1) Functional Description

(a) Output stage and protection circuits

The output stage consists of two Darlington configurations in class B arrangement. Each output transistor can deliver 1.5A maximum; VCEO is 60V. The operation of the transistors remains well within the SOAR area under all circumstances. This protection is provided by the thermal protection circuit, the current-voltage detector and the short circuit protector.
The internal circuit is specifically designed to the output transistors extra stability; this is illustrated in **Fig. 7-11**, where typical SOAR curves are shown for the lower output stage.

(b) Driver and switching circuit

Pin 1 is the input for the driver of the output stage. The signal at Pin 1 is also applied to Pin 3, which is the input of a switching circuit (Pins 1 and 3 are connected via external resistors). This switching circuit rapidly turns off the lower output stage when the flyback starts;therefore it allows quick start of the flyback generator. The maximum required input signal for maximum output current peak-to-peak (3A) is only 3V.

(c) Flyback generator

During scan the capacitor between Pins 6 and 8 is charged to a level which is dependent on the value of the rsistor at Pin 8 (see **Fig. 7-11**). When flyback starts and the voltage at the output pin (Pin 5) exceeds the supply voltage, the flyback generator is activated. The supply voltage is then connected in series, via Pin 8, with the voltage across the capacitor during the flyback period. During scan the supply voltage can be reduced to the required scan voltage plus the saturation voltage of the output transistors. The amplitude of the flyback voltage can be chosen by changing the value of the external resistor at Pin 8.
It should be noted that the application is chosen such that the lowest voltage at Pin 8 is greater than 1.5V during normal operation.

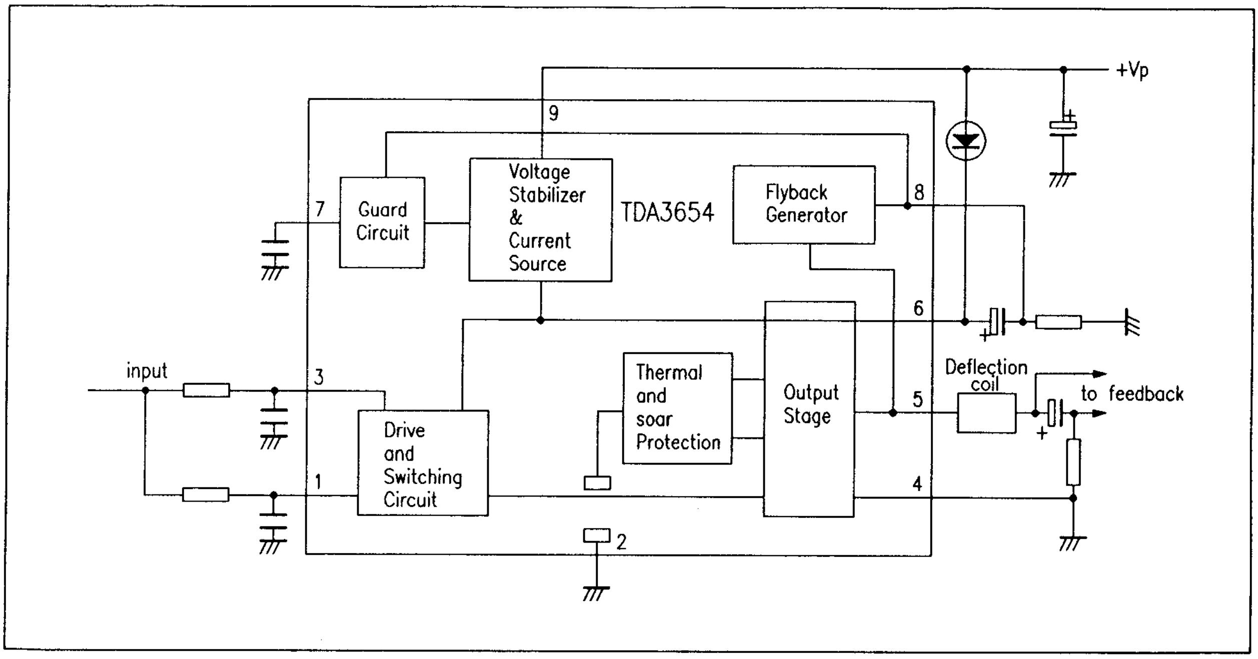
(d) Guard circuit

When there is no deflection current, the voltage at Pin 8 becomes less than 1V and the guard circuit produces a DC voltage at Pin 7. This voltage can be used to blank the picture tube, so that the screen will not burn.

(e) Voltage stabilizer

The internal voltage stabilizer provides a stabilized supply of 6V to drive the output stage; the drive current is not affected by supply voltage variations.

2) Block Diagram



+Vp
9
Voltage Stabilizer & Current Source
TDA3654
Flyback Generator
8
7
Guard Circuit
6
input
3
Thermal and soar Protection
Output Stage
Deflection coil
to feedback
5
Drive and Switching Circuit
1
4
2

Fig. 7-11 Block Diagram

8. Remote Control Section

8-1. Introduction

P-70 is a television receiver control system based on TMS73C127 microcontroller. It will perform the control for the TV hardware functions such as tuning, video processing and source switching.

The user can control the TV set via a RC5-extended remote control or the local keyboard. The TV screen is used for displaying menu and status information.

8-2. Short Specification

8-2-1. Tuning

- Voltage synthesized tuning system via a 14 bit digital to analog converter.
- Automatic search tuning based on analogue AFC signal and IDENT signal.
- 3 different bands.
- Fine tuning up/down.
- Selection of 90 programs directly with DIGITS(0~9, one/two digit selection) or with program up/down functions.
- AFC following function.

8-2-2. Video

- Control of the video function.
  - brightness
  - color
  - contrast
  - peaking
  - tint(optional)
- Preference function.
- Video mute function.

8-2-3. Audio

- Control of the audio functions.
  - volume
  - mono/stereo(only in AV mode)
- Mute function.

8-2-4. Multi Standard

- SECAM-L system.
  Manual standard switching.
  (PAL/SECAM↔FRANCE)
- Single system.

8-2-5. Source Switching

- Manual source selection.
- Automatic AV source selection.

8-2-6. Teletext

- List mode
- FLOF mode

8-2-7. Miscellaneous

- Menu control to reduce the number buttons on the remote control.
- OSD Status display function.
- On Screen Display of user function feedback, TV status and menus.
  OSD language selection (up to 5).
- LED to indicates Remocon Control reception, Timer on/off and Stand-by.

8-3. Basic Hardware Configurations

The main microcontroller is the TMS73C127(12K ROM, 256KByte RAM). This device incorporates the tuning PWM dac, general purpose I/Os, anlogue AFC input and OSD hardware.

- TELETEXT decoder SAA5254 1 PAGE TELETEXT decoder.
- Non volatile EEPROM X24C04(4K bits).

8-4. Requirements

8-4-1. Functional Requirements

8-4-1-1. Option

1) SECAM-L Standard

FRANCE
PAL/SECAM,SECAM-L

2) External source

2 AV SYSTEM	AV1, AV2
1 AV SYSTEM	AV

3) Stand-by on/off

Yes : Automatic stand-by off at master SW on
No : Stand-by on at master SW on

4) TELETEXT

TELETEXT Installed
-90 program, 30 TTX List store

5) BAND

VHF-L, VHF-H, UHF
UHF only

6) Tint control

Tint control	installed

7) Peaking control

Peaking control	installed

8) NTSC Control

NTSC control	installed

8-4-1-2. Switch-On

Purpose: Turn the TV on in a defined state
Input: Main switch when option is activate
Stand-by key
Program key
Status key
One/two digit key
Digit key 0–9
On timer

All other keys and external signals are ignored.

Processing:
1) Put the TV in the following initial state :

- Program No.
- Switch on by digit key : 0–9
- Another Key ; Last program NO
- On timer
  - invalid on Prog NO.:Last program NO.
  - valid on prog NO.:According to on prog NO.
- Tuning states according to prog. NO.
- Favorite video state.
- TELETEXT SWITCHED OFF.
- Menu off.
- Audio mute off.
- Main source is TV when no video ident is active, otherwise change to AV mode. See 8-2-5.
- Sleep timer off.

Output : TV is switched on.
OSD : see **Fig 8-1.**
1st line

- Program NO. : 1 or 2 digit program number. The program number is displayed as a single digit when the number is 9 or less, otherwise two digits are displayed.
- Source symbol : No source symbol is displayed during TV mode. In AV mode, AV symbol & number (2AV system only) is displayed.
- System TV mode, SECAM-L system : A stored system for current prog NO is displayed when TV mode is selected. In other system or AV mode, no system name is displayed (color=green).

2nd line :

- TV Mode : No audio mode is displayed.
- AV mode : User selected.
  OSD time is 4 seconds.

8-4-1-3. Menu

1) Introduction

The less frequently used functions are only accessible via a simple two level menu. 5 keys are used for the control menu. The menu can not be selected when function menu is activated. Appendix 5 shows the structure for 5 languages. The menu is activated by pressing the menu key. The selected sub-menu is displayed with a red coior. The initial sub-menu will be PICTURE each time the main menu is selected. From the main menu, the user can select a sub-menu by two operations:

a. Select a sub-menu using the UP/DOWN Keys, the selection can wrap around from the bottom line to the tip line and vice versa.

b. Move to sub-menu.
Sub-menu is activated by pressing LEFT/RIGHT key after select a sub-menu.

Initially the first line is selected. The user must make a choice again by pressing the UP/DOWN keys. The selected function is activated by either pressing the RIGHT key (which will increase the selected control) or by pressing the LEFT key (which will decrease the control).
The LEFT/RIGHT Keys have different meaning in some sub-menus to (be described at each sub-menu operation). Appendix 5 illustrates how the user can go back to a higer menu level or leave the menu. The menu key is used to return to a higer level in the menu tree.
The menu mode is canceled by pressing menu key in main the menu.
The TV key is used to leave the menu at any level. As long as the menu is active no other keys except the ones below are accepted.

MENU, UP, DOWN, LEFT, RIGHT, TV, STANDBY, MUTE.

2) Picture menu

The following functions can be selected via this menu :
- Brightness
- Colour
- Contrast
- Peaking : This function is only added to the menu when Peaking Control option is selected.
- Tint : This function is only added to the menu when tint control option is selected.

3) Clock menu

The following functions can be selected Via this menu :
- Clock
- ON TIME
- OFF TIME
- ON Prog. NO
- Timer on/off

Adjust time

Increase the hours and minutes by pressing the RIGHT/LEFT key.
Initially the hour & minute is displayed --|--.
The hour & minute becomes 00:00 by pressing LEFT/RIGHT key at initial state.

Setting ON program number

This function is activated by the ON timer.
Program No becomes 00 by pressing LEFT/RIGHT key at initial state.The LEFT/RIGHT key will decrease/increase the program No after this.

Timer ON/OFF

The state is toggled on/off by pressing LEFT/RIGHT key.
This key is available when :
- Clock is activated.
- At least, ON or OFF TIMER is activated.

4) Language mode

This function changes the OSD language. 5 languages are available.
-English
-German
-French
-Spanish
-Italian

First,select this function at main menu, and then activate the menu by pressing the LEFT/RIGHT key. The actual choice is made by pressing the UP/DOWN keys.
The selected language is stored in the EEPROM immediately.

8-4-1-4. Function Set

1) Introduction

6 keys plus the digit keys control the function set. The function set cannot be selected when MENU is activated. Initially the picture menu is selected and the function set is activated by pressing the function key.
Appendix 5 shows the structure of function set. The function set is activated only by pressing local function key.

Function set is activated when the menu and function keys have the same function. The selected sub-menu is displayed with a red color. The initial sub-menu will be MANUAL STORE each time main function is selected. From the main function set the user can select a sub-menu by two ways:

a. Select a sub-menu using UP/DOWN key. The selection can wrap around from the bottom line to the top line and vice versa.

b. Move to sub-menu.
Sub-menu is activated by pressing LEFT/RIGHT key after select a sub-menu.

Initially the first line is selected. The user must make a choice again by pressing the UP/DOWN key. The selected function is activated by either pressing the RIGHT key, which will increase the selected control, or by pressing the LEFT key which will decrease the control.

Appendix 5 illustrates how the user can go back to a higer function level or leave the function set. The menu or function keys are used to return to a higer level in the menu tree. The function set mode is canceled by pressing above two keys.

MENU, FUNCTION, UP, DOWN, LEFT, RIGHT, TV, STANDBY, digit keys 0~9, MUTE.

The following functions can be selected via function set:
- Manual store
- Auto store
- Fine tune
- Sort
- OPTION DIODE(RD 02) : AV on/off(1AV system only).

2) Manual store mode

Contents of Manual Store

Line 1: System represents the Color system select function.
LEFT/RIGHT key is used to select the wanted system standard.
This function is activated only when SECAM-L option is activated.

Line 2: Search Up-Down
By placing the cursor on this line the search up/down function is selected (cursor means the red color of OSD).
Search up/down starts by pressing LEFT/RIGHT key respectively.
During a Search, the OSD will show(see Appendix 5).
-the current selected tuner band
-Prog. Number:
-Search direction
-an analogue indication of the tuning voltage(tuning position bar)
Search will continue until a signal is found. A detailed description of Tuning is given in 8-2-1.
OSD will return to Manual Store menu after a station is found.
Band Up/Down are occured by pressing LEFT/RIGHT key for 3 sec.
Search is canceled by the keys below.

MENU, FUNCTION, UP, DOWN, TV, STANDBY.

Line 3: Program No PXX
XX represents a program no.
This program number is only used by the store function.
When the Manual Store is activated xx will be an initial value equal to the last selected program.
This line can be used for :
-Entering a program number which will be used to store a program.
-Incrementing/decrementing the program number used to store a program LEFT key increments the number. The number must wrap arougn form 0 → 99 and from 99 → 0. The dight keys 0-9 is also available (fixed two digit input).

Line 4: Store
The user can store the contents of above 4 line to EEPROM by pressing LEFT/RIGHT key. Store O.K is displayed in the right side of 'STORE'.
'O.K' is displayed until the user adjusts the contents of the above 3 lines.

3) Auto store function

Auto store function is selected by pressing LEFT/RIGHT key when the cursor is placed on this function.

Auto Store will search and store all available stations.
The start program number is 0 and Increments after a station is found and stored.
During a search, the OSD will show (see Appendix 5):
-the current selected tuner band.
-Prog. No.
-an analogue indication of the tuning voltage (tuning position bar).
If one is found, the below procedure is executed:
-store to EEPROM.
-increment program number.
-search for next station starts.
In case of SECAM-L system, the Auto store performs twice.
One is for SECAM-L, the other is for PAL/SEC.
If 90 programs are stored or the last band and tuning voltages are reached auto store ends return to main function set.
Search is canceled by the keys below.

MENU, FUNCTION, UP, DOWN, STANDBY

4) SORT function

Because auto store function stores are all available stations, the user sometimes wants to rearrange them. Via this menu the user can rearrange the stored programs after auto store.

Line 1: FROM PXX
XX represents source Program No which will transfer to the another program location. When the SORT is activated xx will be an initial value equal to the last selected program. PXX is incremented/decremented by LEFT/RIGHT key.
The program is changed according to new program number.
The digit keys 0~9 are also available (fixed two digit input).

Line 2: Target program number PXX
XX represents Program number which a program(selected in the 1st line) will be copied. When the SORT is activated XX will get two kinds of value as below:
–'--' after master on.
–'XX' previous selected value PXX is incremented/decremented by LEFT/RIGHT keys.
The program is changed according to new program number.
The digit keys 0~9 are also available (fixed two digit input).

Line 3: Store
User can store the contents of a program(selected in the 1st line) to the PR No of the second line by pressing LEFT/RIGHT key.
The store function has no operation when the target Program number is not complete. After storing the target program no is incremented by one when source program number is changed.

5) Fine tuning

Placing the cursor on the line and pressing the LEFT/RIGHT key will activate fine tuning UP/DOWN. During an search, the OSD will show (see Appendix 5):
–the current selected tuner band.
–Prog. No.
– an analogue indication of the tuning voltage (tuning position bar).
Fine tuning is actived only during pressing LEFT/RIGHT key.
The fine tuning mode is chancelled automatically after 4 sec if the user presses no more menu related keys.
After fine tuning, the AFC function is suspended until search or program change.

6) AV ON/OFF

Via this menu user can control AV ON/OFF function when 1 AV system is selected.
The state is toggled ON/OFF by pressing LEFT/RIGHT key.
(OPTION DIODE : RD02)

8-4-2. External Interface Requirements

8-4-2-1. Microcontroller Pins

Table 8-1 Microcontroller Pins

Pin No.	Signal Name	Pin Name	I/O	Function
1	PWM 1-0	VT	O	Tuning voltage control out(14bit)
2	PWM1-1	Volume	O	Volume control out(6bit)
3	PWM1-2	Bright	O	Bright control out(6bit)
4	PWM1-3	Colour	O	Colour control out(6bit)
5	PWM1-4	Contrast	O	Contrast control out(6bit)
6	PWM1-5	Tint	O	Tint control out (6bit)
7	PWM1-6			Reserved
8	PWM1-7	Stereo	O	Stereo control out(6bit) TV mode : Lo fix AV mode : High = Stereo Lo = mono

Table 8-1 Microcontroller Pins(Continued)

Pin No.	Signal Name	Pin Name	I/O	Function
9	PWM1-8	SECAM-L	O	System control out Hi=SECAM-L'
10	PWM1-9	SECAM-L	O	System control out Hi=SECAM-L
11	B0	VHF-L	O	Band Switching Control Lo=VHF-L
12	B1	VHF-H	O	Band Switching Control Lo=VHF-H
13	B2	VHF-L	O	Band Switching Control Lo=UHF
14	B3	AV1	O	AV1 Source selection output Hi=AV1
15	B4	AV2	O	AV2 Soure selection output Lo=AV2
16	B5		O	Reserved
17	B6	Stand-by LED	O	Stand-by Off =Hi On=Lo
18	B7	RMC/Timer LED	O	Stand-by off : RMC LED, Blink Stand-by on : Timer On=Lo Off=Hi
19	A0	AFT	I	Analogue AFC input
20	C0	Key 0	I/O	Local key scan line
21	C1	Key 1	I/O	Local key scan line
22	C2	Key 2	I/O	Local key scan line
23	C3	Key 3	I/O	Local key scan line
24	C4	Key 4	I/O	Local key scan line
25	C5	Key Option 1	O	Option checkout 1 Lo=check, Hi=Normal
26	C6	Key Option 2	O	Option checkout 2 Lo=check, Hi=Normal
27	Vss	Vss	I	Ground
28	C7	Sync Ident		Sync Ident (Valid only at AV mode) Lo-Valid sync
29	D0	Burst Ident		Connected to ground through 10K resistor
30	D1			Reserved
31	D2			Reserved
32	D3			Reserved
33	RED	RED	O	RED OSD output,active Lo
34	GREEN	GREEN	O	GREEN OSD output, active Lo
35	BLUE	BLUE	O	BLUE OSD Output : active Lo
36	Yout	Y-out	O	Fast Blanking Output, active Lo
37	HSYNC	HSYNC	I	Horiziontal OSD Sync Input Polarity : active Lo
38	VSYNC	VSYNC	I	Vertical OSD sync input Polarity : active Lo
39	OSD OSC IN	OSD OSC IN	I	OSD clock input
40	OSD OSC OUT	OSD OSC OUT	O	OSD clock output
41	A2	RF Ident	I	RF Ident RF Ident
42	TEST	GND		Ground
43	OSC IN	OSC IN	I	Input 4MHz Crystal
44	OSC OUT	OSC OUT	O	Output 4MHz Crystal
45	RESET	RESET	I	Microcontroller reset Input Lo=Status pin sctive
46	AV2 Ident	Scart Ident 2	I	Input Status Pin 8 AV2 source Hi=Status Pin active

Table 8-1 Microcontroller Pins(Continued)				
Pin No.	Signal Name	Pin Name	I/O	Function
47	A3	RMC	I	RC-5 Remote control input Active Lo
48	A4	Peaking	O	Peaking control coutput Avtive Hi
49	A5	NTSC Ident		Reserved
50	A6	AV1 Ident	I	Input Status Pin 8 AV1 source Hi=Status pin active
51	SDA	SDA	I/O	IIC BUS Data
52	SCL	SC1	O	IIC BUS Clock
53	A7	Power	O	Power Supply stand-by output Power Supply On=Hi Power Supply Off=Lo
54	Vcc	Vcc	I	Power Supply Voltage

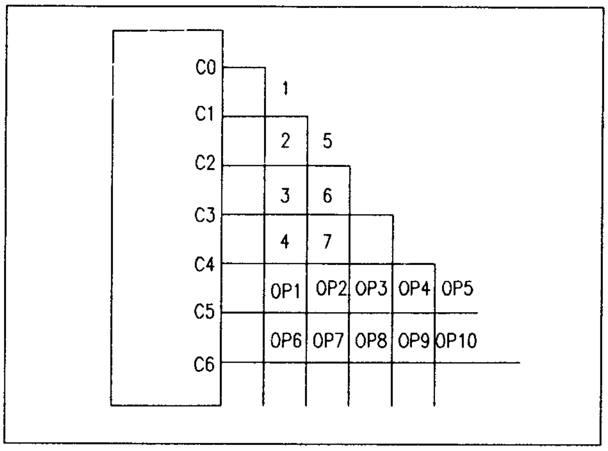


Fig. 8-1 Local Keyboard Commands

Table 8-2 Local Keyboard Commands			
Key No.	Key Name	TV	TTX
01	Power	Stand-by on/off	Stand-by on/off
02	Up	Menu Up/Program Up	Menu Up/TTX page up
03	Right	Menu Right/Volume Up	Menu Right/Volume Up
04	Function	Function	
05	Down	Down Menu	Menu down/TTX page down
06	Left	Left/Volume Down	Menu Left/Volume down
07	Status	Status	Status

Table 8-3 Microcontroller Pins					
Opt No.	Opt Name	Description	Opt No.	Opt Name	Description
01	TTX	Lo=TTX installed	06	Band	Hi=3 Band Lo=UHF Only
02	AV	Hi=1 AV system Lo=2 AV system	07	Woofer	Lo=Woofer volume installed
03	SYSTEM	Hi=SECAM-L Lo=Single system	08	Auto Power	Hi=Auto power on Lo=No Auto power on
04	Peaking	Hi=Peaking installed	09		Reserved
05	TTX Mode	Hi=LIST when power on Lo=FLOF when power on	10	NTSC TINT	Hi=NTSC control ebable

Notes:Lo means Diode exists

9. Teletext Section(Option)

9-1. SAA5254

9-1-1. SAA5254

Single Page Teletext decoder with automatic packet 26 language processingl VT1.1X.

9-1-2. General Description

This IC was enhanced to include automatic packet 26 processing of language extension. The earlier version of SAA5254 was limited to the main West European languages since it could only handle 7-bit data; the inclusion of automatic x/26 processing increases the range of countries to include all those currently transmitting World System Teletext.

9-1-3. Features

- Complete teletext decoder including page memory and FASTEXT links in a single 40-pin DIL package.

- Automatic processing of extension packet 26 for widest possible language decoding.

- Low software overhead for the control microprocessor.

- Wide range of language options will be available:
/E West European
/H East European
/T Euro-Turkish
Contact IPM for the latest available options.

- Hardware and software compatible to SAA5249.
"Instant!" access teletext docoder.

9-1-4. Reference Data

Table 9-1 Reference Data

Symbol	Parameter	Min.	Typ.	Max.	Unit
V_{DD}	Supply	4.5	5.0	5.5	volts
I_{DD}	Supply current	–	74	148	mA
V_{syn}	Sync amplitude	0.1	0.3	0.6	volts
V_{vid}	Video amplitude	0.7	1.0	1.4	volts
T_{amb}	Operating ambient temperature	-20	–	+70	°C

9-2. SAA5254 Pin Function

Table 9-2 SAA5254 Pin Function

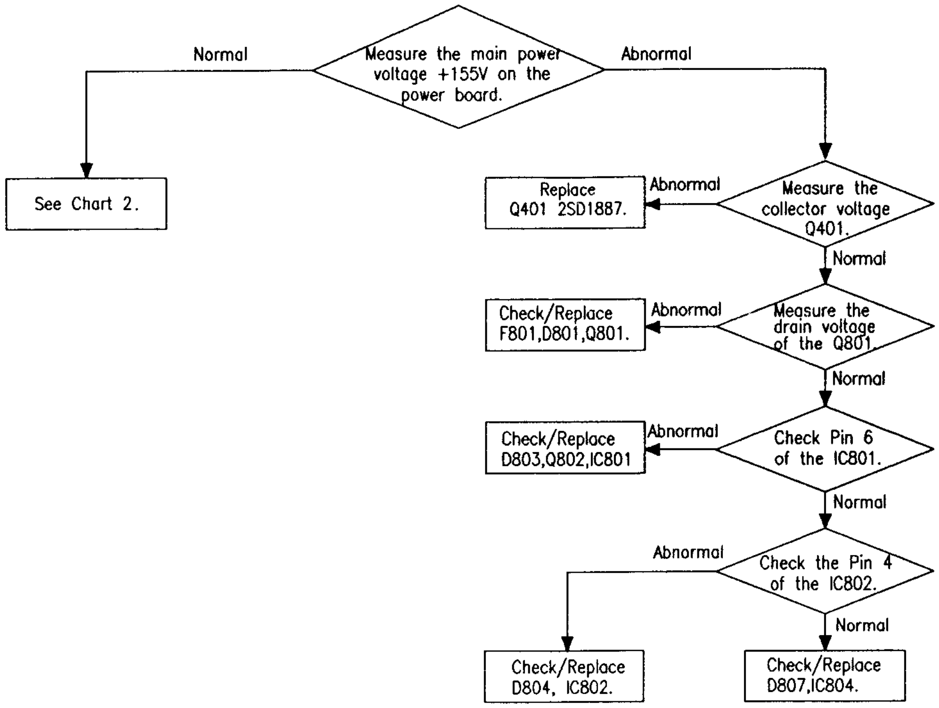
Pin No.	Symbol	Function
1	V_{DD}	+5V Supply
2	OSC OUT	27MHz Crystal Oscillator Output
3	OSC IN	27MHz Crystal Oscillator Input
4	OSC GND	0V Crystal Oscillator Ground
5	VSS	0V Ground
6	REF+	Positive Reference Voltage for ADC
7	BLACK	Video Black Level Storage Pin
8	CVBS	Composite Video Input Pin
9	IREF	Reference Current Input Pin.
10	V_{DD}	+5V Supply

Table 9-2 SAA5254 Pin Function(Continud)

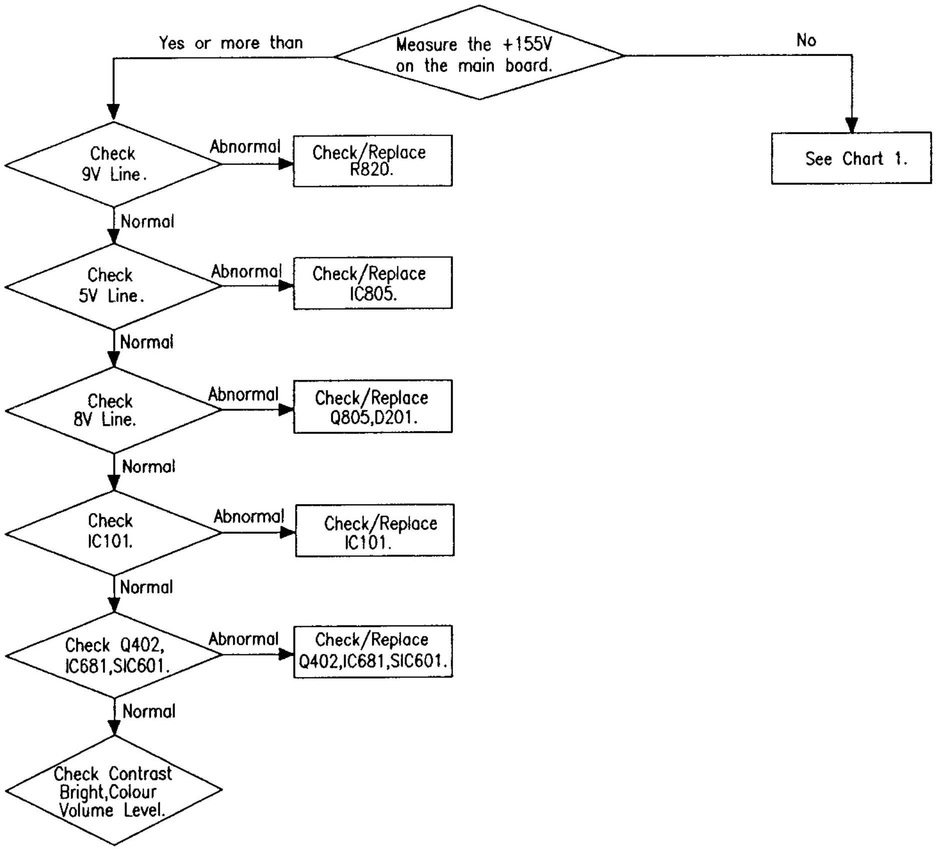
Pin No.	Symbol	Function
11	POL	STTV/LEB/FFB Polarity Selection Pin.
12	STTV/LFB	SYNC to TV Output Pin
13	VCR/FFB	PLL Time Constent Switch/Field Input Pin.
14	VSS	Ground
15	R	RED Output
16	G	Green Output
17	B	Blue Output
18	RGB REF	Input DC Voltage to Define the Output High Level on the RGB Pins.
19	BLAN	Dot Rate Fast Blanking Output
20	VSS	Ground
21	COR	Programmable output to provide contrast reduction of the TV picture for mixed text and picture displays or when viewing. Newsflash/subtitle pages. Open drain output.
22	ODD/EVEN	25Hz output synchronized to the input CVBS field SYNC pulses to produce a non interlaced by adjustment of Vertical Deflection currents.
23	Y	Dot rate character output of teletext for ground colour information
24	SCL	Serial Clock Input for I^2C BUS.
		Serial Data Port for I^2C BUS.
25	SDA	Internally Connected
26	I.C	Internally Connected
27	I.C	Internally Connected
28	I.C	Internally Connected
29	I.C	Internally Connected
30	I.C	Internally Connected
31	I.C	Internally Connected
32	I.C	Internally Connected
33	I.C	Internally Connected
34	I.C	Internally Connected
35	I.C	Internally Connected
36	I.C	Internally Connected
37	I.C	Internally Connected
38	I.C	Internally Connected
39	I.C	Internally Connected

10. Troubleshooting Charts

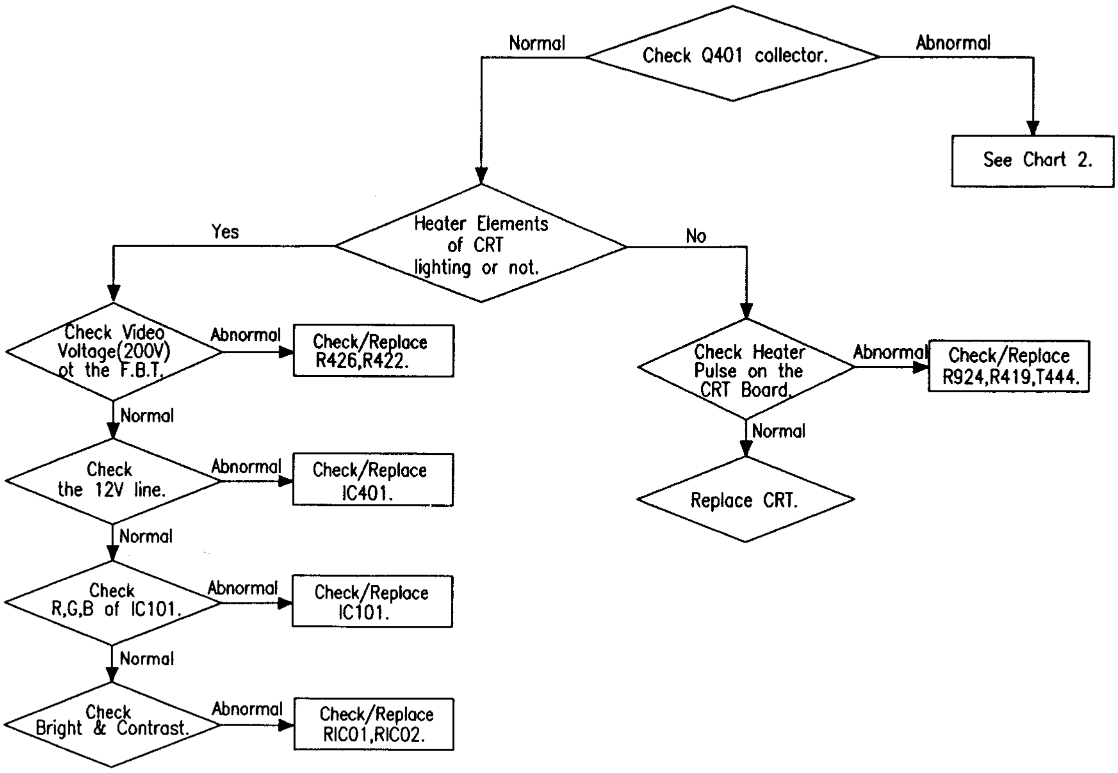
10-1. No Power : Chart 1


Measure the main power voltage +155V on the power board.
Normal
Abnormal
See Chart 2.
Measure the collector voltage Q401.
Abnormal
Replace Q401 2SD1887.
Normal
Measure the drain voltage of the Q801.
Abnormal
Check/Replace F801,D801,Q801.
Normal
Check Pin 6 of the IC801.
Abnormal
Check/Replace D803,Q802,IC801
Normal
Check the Pin 4 of the IC802.
Abnormal
Check/Replace D804, IC802.
Normal
Check/Replace D807,IC804.

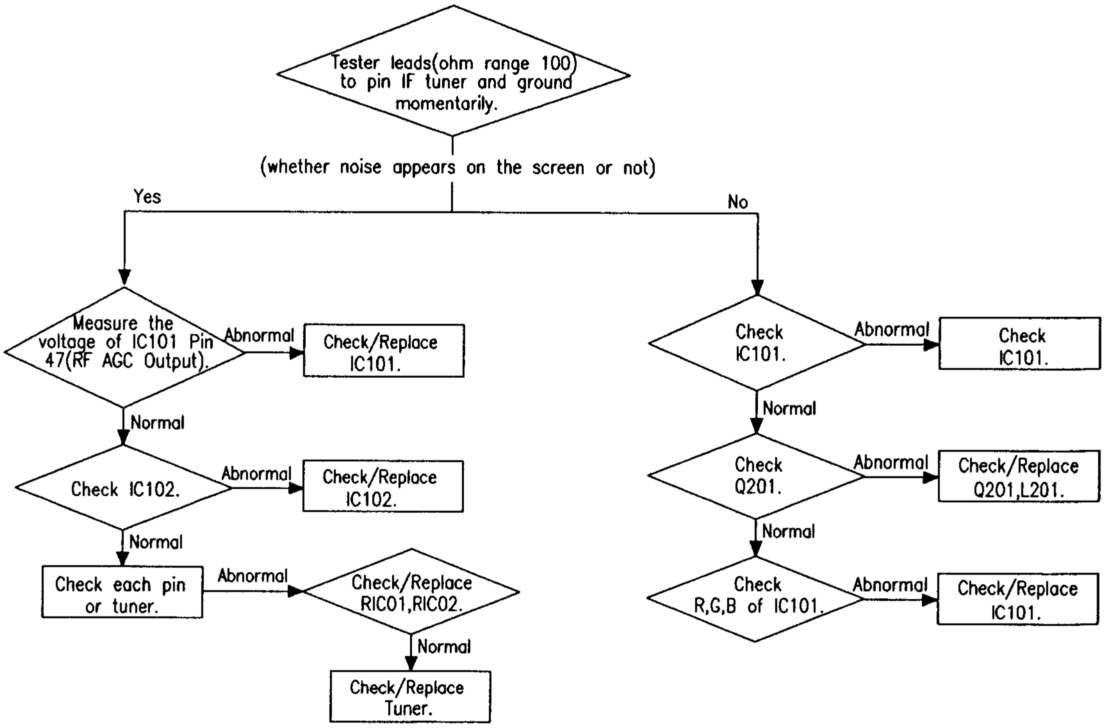
10-2. No Raster and No Sound : Chart 2


Measure the +155V on the main board.
Yes or more than
No
See Chart 1.
Check 9V Line.
Abnormal
Check/Replace R820.
Normal
Check 5V Line.
Abnormal
Check/Replace IC805.
Normal
Check 8V Line.
Abnormal
Check/Replace Q805,D201.
Normal
Check IC101.
Abnormal
Check/Replace IC101.
Normal
Check Q402, IC681,SIC601.
Abnormal
Check/Replace Q402,IC681,SIC601.
Normal
Check Contrast Bright,Colour Volume Level.

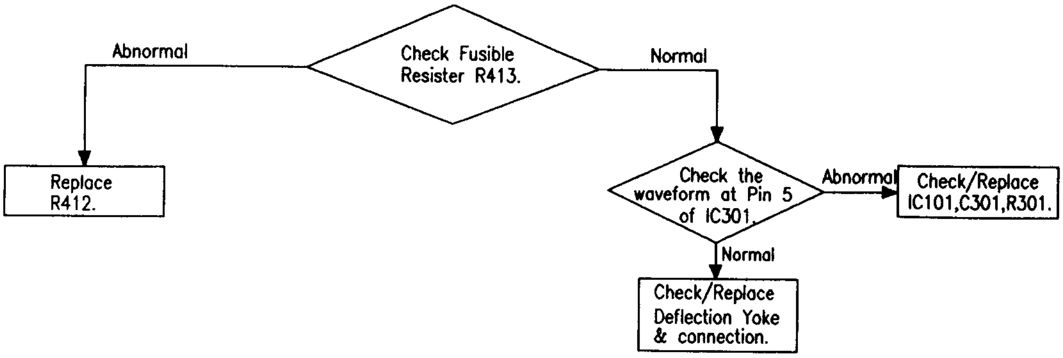
10-3. No Raster (Sound OK) : Chart 3


Check Q401 collector.
Normal
Abnormal
See Chart 2.
Heater Elements of CRT lighting or not.
Yes
No
Check Video Voltage(200V) at the F.B.T.
Abnormal
Check/Replace R426,R422.
Normal
Check the 12V line.
Abnormal
Check/Replace IC401.
Normal
Check R,G,B of IC101.
Abnormal
Check/Replace IC101.
Normal
Check Bright & Contrast.
Abnormal
Check/Replace RIC01,RIC02.
Check Heater Pulse on the CRT Board.
Abnormal
Check/Replace R924,R419,T444.
Normal
Replace CRT.

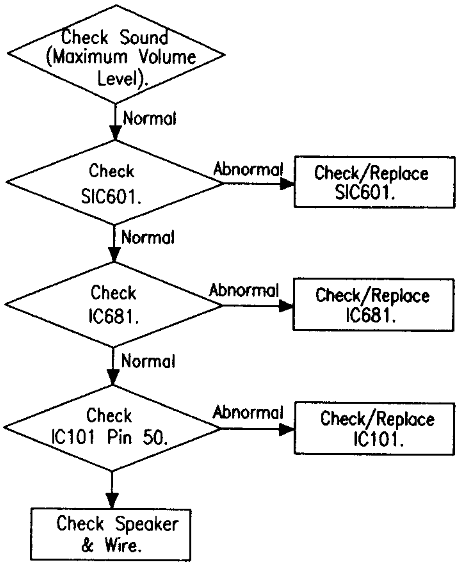
10-4. No Picture (Raster OK) : Chart 4


Tester leads(ohm range 100) to pin IF tuner and ground momentarily.
(whether noise appears on the screen or not)
Yes
No
Measure the voltage of IC101 Pin 47(RF AGC Output).
Abnormal
Check/Replace IC101.
Normal
Check IC102.
Abnormal
Check/Replace IC102.
Normal
Check each pin or tuner.
Abnormal
Check/Replace RIC01,RIC02.
Normal
Check/Replace Tuner.
Check IC101.
Abnormal
Check IC101.
Normal
Check Q201.
Abnormal
Check/Replace Q201,L201.
Normal
Check R,G,B of IC101.
Abnormal
Check/Replace IC101.

10-5. No Vert Scan(One Horiz, Line Raster) : Chart 5


Check Fusible Resister R413.
Abnormal
Normal
Replace R412.
Check the waveform at Pin 5 of IC301.
Abnormal
Check/Replace IC101,C301,R301.
Normal
Check/Replace Deflection Yoke & connection.

10-6. No Sound(Picture OK) : Chart 6


Check Sound (Maximum Volume Level).
Normal
Check SIC601.
Abnormal
Check/Replace SIC601.
Normal
Check IC681.
Abnormal
Check/Replace IC681.
Normal
Check IC101 Pin 50.
Abnormal
Check/Replace IC101.
Check Speaker & Wire.

SAMSUNG

Model : CX6835T, Z

SERVICE Manual SUPPLEMENT

Supplement to the Service Manual for Chassis P70 & RM135.
This supplement contains only these circuit diagrams, P.C.B and change notes differing from the Service Manual for Chassis P70 & RM135. Use both this supplement and the Service Manual part number 38144-P700-00.

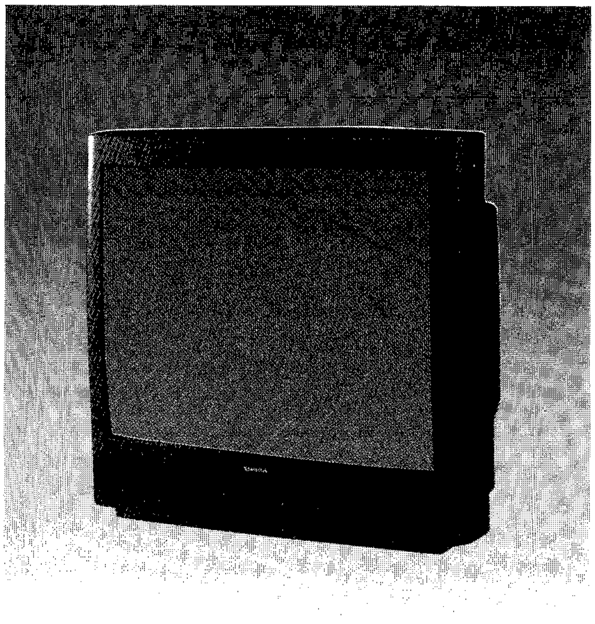


Table of Contents

1. Precautions 1

2. Specifications 4

3. Electrical Parts List 5

4. Exploded View & Parts List 26

5. Servicing Diagram 29

1. Precautions

1-1 Safety Precautions

Before returning the unit to the customer, always make a complete safety check that includes the following:

(1) Be sure that none of the built-in protective devices are defective, or have been defeated during servicing. Replace all missing protective shields, especially any that were removed for servicing.

When reinstalling the chassis or other assemblies, be sure to restore all protective devices,including: nonmetallic control knobs, insulating fishpapers, compartment covers/shields and isolation resistor/capacitor networks.

Do not operate this unit without all protective devices installed and functioning.

(2) Make sure that there are no cabinet openings through which people--especially children--might insert their fingers and contact dangerous voltages.
Such openings include: The spacing between the picture tube and the cabinet mask, excessively wide cabinet ventilation slots, and improperly fitted or incorrectly secured back covers.

(3) Antenna Cold Check:
With the unit's AC plug disconnected from the AC source, connect an electrical jumper across the two AC prongs. Connect one lead of an ohmmeter to the AC prong. Touch the other lead to the coaxial connector. If the measured resistance is less than 1.0 megohm or greater than 5.2 megohms, an abnormality exists that must be corrected before the unit is returned to the customer.

(4) Leakage Current Hot Check (See Figure 1-1):
With the unit completely reassembled, plug the AC line cord directly into a 120V AC outlet (Do not use an isolation transformer during this test).
Use a leakage-current tester or a metering system that complies with American National Standards Institute (ANSI C101.1, *Leakage Current for Appliances),* and Underwriters Laboratories *(UL Publication UL1410, 59.7).*
With the unit's AC switch first in the ON position and then OFF, measure the current between a known earth ground (metal waterpipe, conduit, etc.) and all exposed metal parts, including: antennas, handle brackets, metal cabinets, screwheads and control shafts. The current measured should not exceed 0.5 milliamp. Repeat the test, by reversing the power plug in the AC outlet.

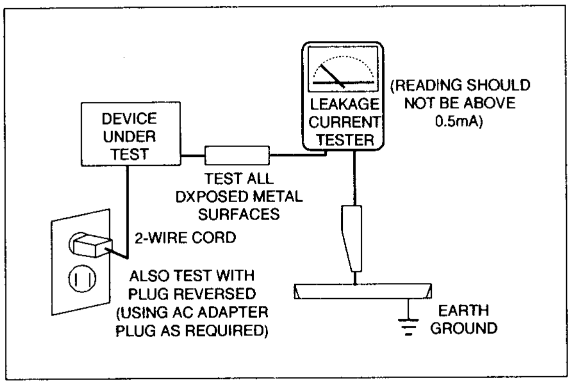

LEAKAGE CURRENT TESTER
(READING SHOULD NOT BE ABOVE 0.5mA)
DEVICE UNDER TEST
TEST ALL DXPOSED METAL SURFACES
2-WIRE CORD
ALSO TEST WITH PLUG REVERSED (USING AC ADAPTER PLUG AS REQUIRED)
EARTH GROUND

Fig. 1-1. AC Leakage Test

(5) X-ray Limits:
The picture tube is especially constructed to prohibit X-ray emissions. To ensure continued X-ray protection, heed the following:

The replacement picture tube must be the same type as the original. Carefully reinstall the picture tube shields and mounting hardware; these also provide X-ray protection.

(6) High Voltage Limits:
High voltage must be measured each time servicing is done on the B+, horizontal deflection or high voltage circuits. Correct operation of the X-ray protection circuits must be reconfirmed whenever they are serviced. (X-ray protection circuits also may be called "horizontal disable" or "hold-down").

Heed the high voltage limits. These include the *X–ray Protection Specifications Label,* and the *Product Safety and X-ray Warning Note* on the service data schematic.

High voltage is maintained within specified limits by close-tolerance, safety-related components and adjustments. If high voltage exceeds the specified limits, check each of these special components (Identified on the schematic) and take corrective action.

(7) Design Alteration Warning - Never alter or add to the mechanical or electrical design of this TV receiver. Example: the addition of auxiliary audio or video output connections.

Such alterations might create a safety hazard. Any design changes or additions will void the manufacturer's warranty. The servicer will be responsible for any personal injury or property damage that results.

(8) Picture Tube Implosion Warning:
The picture tube in this receiver employs integral implosion Protection. To ensure continued implosion protection, the replacement picture tube must be the same as the original.

Do not remove, install, or handle th picture tube without first putting on shatterproof goggles equipped with side shields. Never handle the picture tube by its neck. Some "in-line" picture tubes are equipped with a permanently attached deflection yoke; do not try to remove such "permanently attached" yokes from the picture tube.

(9) Hot Chassis Warning:
Some TV receiver chassis are electrically connected directly to one conductor of the AC power cord. If an isolation transformer is not used, these may be safely serviced *only* if the AC power plug is inserted so that the chassis is connected to the ground side of the AC power source.

To confirm that the AC power plug is inserted correctly, do the following: Measure the voltage between the chassis and a known earth ground. Use an AC voltmeter. If the reading is greater than 1.0V, then remove the AC power plug, reverse its polarity and reinsert. Re-measure the voltage between the chassis and ground.

Some TV chassis are designed to operate with 85 volts AC between chassis and ground, *regardless of the AC plug polarity.* These chassis can be safely serviced *only* if an isolation transformer inserted in the power line between the receiver and the power source.
Some TV chassis have a secondar ground system in addition to the main chassis ground. This secondary ground system is not isolated from the AC power line. The two ground system are electrically separated by insulating material that must not be defeated or altered.

(10) Observe the original lead dress, especially near the following areas: Antenna wiring, sharp edges, and the AC and high voltage power supplies. Always inspect for pinched, out-of-place, or frayed wiring. Do not change the spacing between components and the printed circuit board. Check the AC power cord for damage. Make sure that leads and components do not touch thermally hot parts.

(11) Components, parts and wiring that appear to have overheated or that are otherwise damaged should be replaced with parts that meet the original specifications. Always determine the cause of overheating or damage. Take corrective action to remove any potential hazards.

(12) Product Safety Notice - Some electrical and mechanical parts have special safety-related characteristics which might not be evident from visual inspection. These safety features and the protection they give might be lost if the replacement component differs from the original--even if the replacement is rated for higher voltage, wattage, etc.

Components that are critical for safety are indicated in the circuit diagram by shading, (⚠) or (⚠). Use replacement components that have the same ratings, especially for flame resistance and dielectric strength specifications. A replacement part that does not have the same safety characteristics as the original might create shock, fire or other hazards.

1-2. Servicing Precautions

CAUTION: First read the "Safety Precautions" section of this manual. If some unforeseen circumstance creates a conflict between the servicing and safety precautions, always follow the safety precautions.

(1) Always unplug the unit's AC power cord from the AC power source before attempting to: (a) Remove or reinstall any component, circuit board or assembly, (b) Disconnect an electrical plug or connector, (c) Connect a test component in parallel with an electrolytic capacitor.

Warning: An electrolytic capacitor installed with the wrong polarity might explode.

(2) Never defeat any of the B+ voltage interlocks. Do not apply AC power to this unit or any of its assemblies unless all solid-state heat sinks are correctly installed.

Always connect a test instrument's ground lead to the instrument chassis ground *before* connecting the positive lead. Always remove the instrument's ground lead last.

(3) The servicing precautions are indicated on the cabinet, chassis or components. Follow them.

(4) Some components are raised above the printed wiring board for safety. An insulation tube or tape is sometimes used. The internal wiring is sometimes clamped to prevent contact with thermally hot components. Reinstall all such elements to their original position.

(5) After servicing, always check that the screws, components and wiring are correctly reinstalled. Make sure that the portion around the serviced part has not been damaged.

Check the insulation between the blades of the AC plug and accessible conductive parts. Examples: metal panels,input terminals and earphone jacks.

(6) Insulation Checking Procedure:
Disconnect power cord from the AC source and turn the power switch ON. Connect an insulation resistance meter (500V) to the blades of the AC plug.

The insulation resistance between each blade of the AC plug and accessible conductive parts (see above) should be greater than 1 megohm.

1-3. ESD Precautions

Electrostatically Sensitive Devices (ESDs)

Some semiconductor ("solid state") devices are easily damaged by static electricity. Such components are called Electrostatically Sensitive Devices (ESDs). Examples: integrated circuits and some field-effect transistors. The following techniques will reduce the occurrence of component damage caused by static electricity:

(1) Immediately before handling any semiconductor components or assemblies, drain the electrostatic charge from your body by touching a known earth ground. Alternatively, wear a discharging wrist strap device (Remove it prior to applying power to the unit--this is an electrical shock precaution).

(2) After removing an assembly equipped with ESDs, place it on a conductive surface such as aluminum foil to prevent the build up of electrostatic charge.

(3) Use only a grounded-tip soldering iron when soldering or unsoldering ESDs.

(4) Use only an anti-static solder removal device. Some solder removal devices are not classified as "anti-static"; these can generate sufficient electrical charge to damage ESDs.

(5) Do not use freon-propelled chemicals. These can generate electrical charges that damage ESDs.

(6) Do not remove a replacement ESD from its protective package until you are ready to install it. Most replacement ESDs are packaged with leads that are electrically shorted together by conductive foam, aluminum foil or other conductive materials.

(7) Immediately before removing the protective material from the leads of a replacement ESD, touch the protective material to the chassis or circuit assembly into which the device will be installed.

Caution: Be sure no power is applied to the chassis or circuit. Observe all other safety precautions.

(8) Minimize bodily motions when handling unpackaged replacement ESDs. Motions such as the brushing together of clothes, o lifting a foot from a carpeted floor can generate enough static electricity to damage an ESD.

2. Specifications

(Units:MHz)

System Items		PAL/SECAM -B/G	PAL/SECAM-B/G -D/K	SECAM - L'/L	PAL - I	Remarks
BAND	VHF	2-12	1-13	B-Q	.	
	UHF	21-69	21-69	21-69	21-69	
	CABLE	S1-S20	S1-S20	S1-S20	.	
	HYPER	S21-S41	S21-S41	S21-S41	.	
IF Carrier Frequency	Picture IFCarrier	38.9	38.9	34.5	38.9	
	Sound IF Carrier	33.4	32.4	41.0	32.9	
	Colour Sub Carrier	34.47	34.47	$f_{DB}=4.28$ $f_{DR}=4.406$	34.47	
CRT	25"	A59EAK71X01	Diagonally measured,Quick start,In-line-gun,Black stripe,110° degrees deflection			
	28"	A66EAK71X01				
Power Requirements		AC 180-260V , 50 Hz , 105 watts				
Antenna Input Impedance		VHF,UHF : 75 Ohm unbalanced type				
Speaker		Impedance : 8 ohm , 5W+5W(Left + Right)				

3. Electrical Parts List

ABBREVIATIONS :

CC	C-CERAMIC	RC	R-COMPOSITION
CE	C-ELECTROLYTIC	RD	R-CARBON
CFS	C-M,POLYESTER	RF	R-FUSIBLE
CK	C-CERAMIC,HK	RM	R-METAL,FILM
CQ	C-POLYPROPYLENE,POLYESTE	RP	R-CEMENT WIRE
CS	C-TANTALIUM,SOLID	RS	R-METAL,OXIDE

NOTE : The items with "*" are usually out of stock since they are seldom required for the routine service. There may be some anticipated delay when you order these items.

S.N.A. = Service Not Available , L/C = Local Purchase

The components identified by mark '**' are critical for safety. Replace only with Supplier part number specified.

When indicating parts by location number, Please include the PWB names
(PWB = Printed Writing Board)

Loc No	Supplier Parts No	Specification
	ASSY-PWB MAIN BUYER ; AMFO ('94.09.05)	
	*3T30-02490-030	CX6835T/UKASX
PWB	36029-0032-000	T1.6 W330 L245 (S.N.A)
	RESISTORS	
J090	31018-177-223	RD 1/8T 22K-J
MR01	31018-177-332	RD 1/8T 3.3K-J
MR02	31018-177-103	RD 1/8T 10K-J
MR03	31018-177-102	RD 1/8T 1K-J
PR09	31018-377-124	RD 1/2T 120K-J
R101	31018-177-101	RD 1/8T 100-J
R102	31018-177-562	RD 1/8T 5.6K-J
R103	31018-177-102	RD 1/8T 1K-J
R104	31018-177-102	RD 1/8T 1K-J
R105	31018-177-101	RD 1/8T 100-J
R106	31018-177-330	RD 1/8T 33-J
R107	31018-377-101	RD 1/2T 100-J
R108	31018-177-682	RD 1/8T 6.8K-J
R109	31018-177-333	RD 1/8T 33K-J
R110	31018-177-473	RD 1/8T 47K-J
R111	31018-177-473	RD 1/8T 47K-J
R112	31018-177-104	RD 1/8T 100K-J
R113	31018-177-101	RD 1/8T 100-J
R114	31018-177-104	RD 1/8T 100K-J
R115	31018-177-104	RD 1/8T 100K-J
R116	31018-177-102	RD 1/8T 1K-J
R117	31018-177-562	RD 1/8T 5.6K-J
R118	31018-177-561	RD 1/8T 560-J
R119	31018-177-562	RD 1/8T 5.6K-J
R120	31018-177-391	RD 1/8T 390-J
R121	31018-177-472	RD 1/8T 4.7K-J
R201	31018-177-102	RD 1/8T 1K-J
R202	31018-177-109	RD 1/8T 1-J
R203	31018-377-470	RD 1/2T 47-J
**R204	A1006-0382	RD 1/2 T(S) 181-J
R205	31018-177-131	RD 1/8T 130-J

Loc No	Supplier Parts No	Specification
R206	31018-177-102	RD 1/8T 1K-J
R207	31018-377-100	RD 1/2T 10-J
R209	31018-177-750	RD 1/8T 75-J
R210	31018-177-222	RD 1/8T 2.2K-J
R211	31018-177-750	RD 1/8T 75-J
R212	31018-177-102	RD 1/8T 1K-J
R251	31018-177-473	RD 1/8T 47K-J
R252	31018-177-333	RD 1/8T 33K-J
R253	31018-177-102	RD 1/8T 1K-J
R254	31018-177-750	RD 1/8T 75-J
R255	31018-177-750	RD 1/8T 75-J
R301	31018-377-105	RD 1/2T 1M-J
R302	31018-177-331	RD 1/8T 330-J
R303	31018-177-100	RD 1/8T 10-J
**R311	31046-567-221	RS 2T 220-J(AUTO)
R401	31018-177-153	RD 1/8T 15K-J
R402	31018-177-824	RD 1/8T 820K-J
R403	31018-177-101	RD 1/8T 100-J
R404	31018-177-332	RD 1/8T 3.3K-J
R405	31018-177-100	RD 1/8T 10-J
R420	31018-177-273	RD 1/8T 27K-J
R501	31018-177-104	RD 1/8T 100K-J
R502	31018-177-473	RD 1/8T 47K-J
R503	31018-177-182	RD 1/8T 1.8K-J
R504	31018-177-182	RD 1/8T 1.8K-J
R505	31018-177-182	RD 1/8T 1.8K-J
R506	31018-177-912	RD 1/8T 9.1K-J
R507	31018-177-103	RD 1/8T 10K-J
R508	31018-377-824	RD 1/2T 820K-J
R509	31018-377-101	RD 1/2T 100-J
R510	31018-177-103	RD 1/8T 10K-J
R512	31018-177-822	RD 1/8T 8.2K-J
R513	31018-177-102	RD 1/8T 1K-J
R514	31018-177-750	RD 1/8T 75-J
R515	31018-177-391	RD 1/8T 390-J
R516	31018-177-392	RD 1/8T 3.9K-J
R517	31018-177-750	RD 1/8T 75-J
R518	31018-177-391	RD 1/8T 390-J
R519	31018-177-392	RD 1/8T 3.9K-J

Loc No	Supplier Parts No	Specification
R520	31018-177-750	RD 1/8T 75-J
R521	31018-177-391	RD 1/8T 390-J
R522	31018-177-392	RD 1/8T 3.9K-J
R523	31018-177-750	RD 1/8T 75-J
R530	31018-177-100	RD 1/8T 10-J
R601	31018-177-183	RD 1/8T 18K-J
R602	31018-177-103	RD 1/8T 10K-J
R603	31018-177-103	RD 1/8T 10K-J
R604	31018-177-202	RD 1/8T 2K-J
R605	31018-177-472	RD 1/8T 4.7K-J
R606	31018-177-472	RD 1/8T 4.7K-J
R607	31018-177-183	RD 1/8T 18K-J
R608	31018-177-113	RD 1/8T 11K-J
R609	31018-177-220	RD 1/8T 22-J
R620	31018-177-102	RD 1/8T 1K-J
R652	31018-177-221	RD 1/8T 220-J
R653	31018-177-221	RD 1/8T 220-J
R666	31018-177-622	RD 1/8T 6.2K-J
R667	31018-177-622	RD 1/8T 6.2K-J
R668	31018-177-622	RD 1/8T 6.2K-J
R669	31018-177-622	RD 1/8T 6.2K-J
R679	31018-177-563	RD 1/8T 56K-J
R680	31018-177-563	RD 1/8T 56K-J
R681	31018-177-472	RD 1/8T 4.7K-J
R682	31018-177-472	RD 1/8T 4.7K-J
R701	31018-377-470	RD 1/2T 47-J
R702	31018-177-103	RD 1/8T 10K-J
R703	31018-177-102	RD 1/8T 1K-J
R704	31018-377-470	RD 1/2T 47-J
R707	31018-177-103	RD 1/8T 10K-J
R901	31018-177-152	RD 1/8T 1.5K-J
R902	31018-177-152	RD 1/8T 1.5K-J
R903	31018-177-152	RD 1/8T 1.5K-J
R904	31018-177-751	RD 1/8T 750-J
R905	31018-177-751	RD 1/8T 750-J
R906	31018-177-751	RD 1/8T 750-J
R907	31018-177-102	RD 1/8T 1K-J
R908	31018-177-102	RD 1/8T 1K-J
R909	31018-177-102	RD 1/8T 1K-J
**R910	A1000-0390	RD 1/2 T(S) 222-J 2.2K
R911	31018-177-181	RD 1/8T 180-J
R913	31018-177-561	RD 1/8T 560-J
R914	31018-177-561	RD 1/8T 560-J
R915	31018-377-104	RD 1/2T 100K-J
R916	31018-377-104	RD 1/2T 100K-J
R917	31018-377-104	RD 1/2T 100K-J
**R918	31046-567-183	RS 2T 18K-J(AUTO)
**R919	31046-567-183	RS 2T 18K-J(AUTO)
**R920	31046-567-183	RS 2T 18K-J(AUTO)
**R921	31028-328-272	RC 1/2T 2.7K-K
**R922	31028-328-272	RC 1/2T 2.7K-K
**R923	31028-328-272	RC 1/2T 2.7K-K
**R924	31059-004-019	RF 2P 1.9-J
R926	31018-177-472	RD 1/8T 4.7K-J
R927	31018-177-472	RD 1/8T 4.7K-J
R928	31018-177-472	RD 1/8T 4.7K-J

Loc No	Supplier Parts No	Specification
R929	31018-377-105	RD 1/2T 1M-J
RR01	31018-177-103	RD 1/8T 10K-J
RR02	31018-177-103	RD 1/8T 10K-J
RR03	31018-377-103	RD 1/2T 10K-J
RR04	31018-177-103	RD 1/8T 10K-J
RR05	31018-177-103	RD 1/8T 10K-J
RR06	31018-177-113	RD 1/8T 11K-J
**RR07	31046-567-123	RS 2T 12K-J(AUTO)
RR08	31018-177-242	RD 1/8T 2.4K-J
RR09	31018-177-333	RD 1/8T 33K-J
RR10	31018-177-120	RD 1/8T 12-J
RR12	31018-177-103	RD 1/8T 10K-J
RR13	31018-177-152	RD 1/8T 1.5K-J
RR14	31018-177-152	RD 1/8T 1.5K-J
RR15	31018-177-202	RD 1/8T 2K-J
RR16	31018-177-911	RD 1/8T 910-J
RR17	31018-177-752	RD 1/8T 7.5K-J
RR18	31018-177-823	RD 1/8T 82K-J
RR19	31018-177-202	RD 1/8T 2K-J
RR20	31018-177-202	RD 1/8T 2K-J
RR21	31018-177-242	RD 1/8T 2.4K-J
RR22	31018-177-223	RD 1/8T 22K-J
RR23	31018-177-242	RD 1/8T 2.4K-J
RR24	31018-177-512	RD 1/8T 5.1K-J
RR25	31018-177-563	RD 1/8T 56K-J
RR26	31018-177-102	RD 1/8T 1K-J
RR27	31018-177-102	RD 1/8T 1K-J
RR30	31018-177-103	RD 1/8T 10K-J
RR31	31018-177-103	RD 1/8T 10K-J
RR32	31018-177-103	RD 1/8T 10K-J
RR35	31018-177-103	RD 1/8T 10K-J
RR36	31018-177-242	RD 1/8T 2.4K-J
RR37	31018-177-473	RD 1/8T 47K-J
RR38	31018-177-222	RD 1/8T 2.2K-J
RR39	31018-177-622	RD 1/8T 6.2K-J
RR40	31018-177-101	RD 1/8T 100-J
RR41	31018-177-122	RD 1/8T 1.2K-J
RR42	31018-177-122	RD 1/8T 1.2K-J
RR43	31018-177-102	RD 1/8T 1K-J
RR44	31018-177-102	RD 1/8T 1K-J
RR45	31018-177-102	RD 1/8T 1K-J
RR46	31018-177-102	RD 1/8T 1K-J
RR47	31018-177-102	RD 1/8T 1K-J
RR48	31018-177-681	RD 1/8T 680-J
RR49	31018-177-681	RD 1/8T 680-J
RR50	31018-177-203	RD 1/8T 20K-J
RR51	31018-177-102	RD 1/8T 1K-J
RR52	31018-177-103	RD 1/8T 10K-J
RR55	31018-177-101	RD 1/8T 100-J
RR56	31018-177-101	RD 1/8T 100-J
RR57	31018-177-101	RD 1/8T 100-J
RR58	31018-177-102	RD 1/8T 1K-J
RR59	31018-177-470	RD 1/8T 47-J
RR60	31018-177-472	RD 1/8T 4.7K-J
RR61	31018-177-473	RD 1/8T 47K-J
RR62	31018-177-472	RD 1/8T 4.7K-J
RR63	31018-177-104	RD 1/8T 100K-J

Loc No	Supplier Parts No	Specification
RR64	31018-177-244	RD 1/8T 240K-J
RR65	31018-177-102	RD 1/8T 1K-J
RR66	31018-177-223	RD 1/8T 22K-J
RR67	31018-177-102	RD 1/8T 1K-J
RR68	31018-177-123	RD 1/8T 12K-J
RR69	31018-177-822	RD 1/8T 8.2K-J
RR70	31018-177-123	RD 1/8T 12K-J
RR71	31018-177-822	RD 1/8T 8.2K-J
RR72	31018-177-103	RD 1/8T 10K-J
RR73	31018-177-222	RD 1/8T 2.2K-J
RR74	31018-177-222	RD 1/8T 2.2K-J
RR75	31018-177-101	RD 1/8T 100-J
RR76	31018-177-101	RD 1/8T 100-J
RR77	31018-177-102	RD 1/8T 1K-J
RR78	31018-177-473	RD 1/8T 47K-J
RR81	31018-177-223	RD 1/8T 22K-J
RR82	31018-177-103	RD 1/8T 10K-J
RR83	31018-177-101	RD 1/8T 100-J
RR84	31018-177-101	RD 1/8T 100-J
RR85	31018-177-473	RD 1/8T 47K-J
RR86	31018-177-102	RD 1/8T 1K-J
RR87	31018-177-103	RD 1/8T 10K-J
TD05	31018-177-103	RD 1/8T 10K-J
TR01	31018-177-332	RD 1/8T 3.3K-J
TR02	31018-177-102	RD 1/8T 1K-J
TR03	31018-177-102	RD 1/8T 1K-J
TR04	31018-177-273	RD 1/8T 27K-J
TR05	31018-177-561	RD 1/8T 560-J
TR06	31018-177-561	RD 1/8T 560-J
TR07	31018-177-561	RD 1/8T 560-J
TR08	31018-177-101	RD 1/8T 100-J
TR09	31018-177-101	RD 1/8T 100-J
TR10	31018-177-101	RD 1/8T 100-J
TR11	31018-177-682	RD 1/8T 6.8K-J
TR12	31018-177-222	RD 1/8T 2.2K-J
	VARIABLE RESISTORS	
VR101	31249-128-001	EVN DJA A03 B14
VR201	31249-128-008	EVN DJA A03 B54
VR401	31249-128-001	EVN DJA A03 B14
VR901	31249-128-004	EVN DJA A03 B13
VR902	31249-128-004	EVN DJA A03 B13
VR903	31249-128-004	EVN DJA A03 B13
VR904	31249-128-004	EVN DJA A03 B13
VR905	31249-128-004	EVN DJA A03 B13
	CAPACITORS	
C101	31417-109-140	CK45 TAPG F 50V 103-Z
C102	31417-109-140	CK45 TAPG F 50V 103-Z
C104	31417-109-140	CK45 TAPG F 50V 103-Z
C105	31607-401-470	CE04W TAPG 16V 100M VENT
C106	31607-402-070	CE04W TAPG 35V 22M
C107	31507-127-012	ECQ B1(V1)H 104J F3(Z3)
C108	31607-401-500	CE04W TAPG 16V 470M-M
C109	31607-402-210	CE04W TAPG 50V 1M
C110	31607-402-210	CE04W TAPG 50V 1M
C111	31607-402-200	CE04W TAPG 50V 0.47M

Loc No	Supplier Parts No	Specification
C112	31607-402-200	CE04W TAPG 50V 0.47M
C113	31607-902-250	CE04W TAPG 50V 0.22M
C114	31507-127-016	ECQ B1 H 472J F3
C115	31417-109-220	CK45 TAPG F 50V 223-Z
C116	31607-402-220	CE04W TAPG 50V 2.2M
C117	31507-127-012	ECQ B1(V1)H 104J F3(Z3)
C118	31507-127-012	ECQ B1(V1)H 104J F3(Z3)
C119	31607-402-220	CE04W TAPG 50V 2.2M
C120	31407-105-110	CC45 TAPG CH 50V 120-J
C121	31417-109-140	CK45 TAPG F 50V 103-Z
C130	31607-402-070	CE04W TAPG 35V 22M
C201	31507-127-010	ECQ B1H 473J F3
C202	31607-401-435	CE04W TAPG 16V 10M-M
C203	31507-127-012	ECQ B1(V1)H 104J F3(Z3)
C204	31607-402-210	CE04W TAPG 50V 1M
C205	31507-127-012	ECQ B1(V1)H 104J F3(Z3)
C206	31607-401-480	CE04W TAPG 16V 220M-M
C207	31507-127-012	ECQ B1(V1)H 104J F3(Z3)
C208	31607-401-470	CE04W TAPG 16V 100M VENT
C209	31607-401-470	CE04W TAPG 16V 100M VENT
C210	31607-803-120	CE04W TAPG 16V 10u-NP
C211	31607-401-435	CE04W TAPG 16V 10M-M
C212	31607-401-435	CE04W TAPG 16V 10M-M
C213	31607-401-500	CE04W TAPG 16V 470M-M
C251	31607-401-435	CE04W TAPG 16V 10M-M
**C301	31517-007-004	ECQ-V1 104J F3
C302	31507-127-016	ECQ B1 H 472J F3
C401	31607-402-210	CE04W TAPG 50V 1M
C402	31507-127-002	ECQ B1H 222J F3
C403	31507-127-012	ECQ B1(V1)H 104J F3(Z3)
C404	31417-109-220	CK45 TAPG F 50V 223-Z
C501	31407-057-180	CC45(T) CH 50V 180-J
C502	31507-127-016	ECQ B1 H 472J F3
C503	31507-127-012	ECQ B1(V1)H 104J F3(Z3)
C504	31507-127-012	ECQ B1(V1)H 104J F3(Z3)
C505	31507-127-012	ECQ B1(V1)H 104J F3(Z3)
C506	31607-401-435	CE04W TAPG 16V 10M-M
C507	31507-127-012	ECQ B1(V1)H 104J F3(Z3)
C508	31507-127-012	ECQ B1(V1)H 104J F3(Z3)
C509	31507-127-012	ECQ B1(V1)H 104J F3(Z3)
C510	31607-401-435	CE04W TAPG 16V 10M-M
C511	31607-401-435	CE04W TAPG 16V 10M-M
C512	31507-127-008	ECQ B1 H 223J F3
C513	31607-401-460	CE04W TAPG 16V 47M
C514	31417-104-400	CK45 TAPG B 50V 102-K
C515	31417-104-400	CK45 TAPG B 50V 102-K
C516	31607-401-460	CE04W TAPG 16V 47M
C517	31507-127-008	ECQ B1 H 223J F3
C518	31507-127-012	ECQ B1(V1)H 104J F3(Z3)
C519	31507-127-024	ECQ-V1H 224J Z3
C520	31417-109-140	CK45 TAPG F 50V 103-Z
C601	31507-127-012	ECQ B1(V1)H 104J F3(Z3)
C602	31407-057-390	CC45(T) CH 50V 390-J
C603	31407-105-280	CC45(T) CH 50V 560-J
C604	31507-137-003	ECQ-B 1 152J F3
C605	31507-127-003	ECQ B1 H 332J F3

Loc No	Supplier Parts No	Specification
C606	31607-401-435	CE04W TAPG 16V 10M-M
**C608	31609-401-440	CE04W 16V 22M
C610	31407-105-660	CC45(T) CH 50V 101-J
C611	31407-105-660	CC45(T) CH 50V 101-J
C612	31407-105-660	CC45(T) CH 50V 101-J
C632	31607-974-003	CE04W TAPG 50V 10M-M
C633	31607-974-003	CE04W TAPG 50V 10M-M
C652	31607-401-435	CE04W TAPG 16V 10M-M
C654	31607-401-435	CE04W TAPG 16V 10M-M
C655	31407-105-660	CC45(T) CH 50V 101-J
C656	31407-105-660	CC45(T) CH 50V 101-J
C657	31407-105-660	CC45(T) CH 50V 101-J
C658	31407-105-660	CC45(T) CH 50V 101-J
C666	31607-974-003	CE04W TAPG 50V 10M-M
C681	31417-109-140	CK45 TAPG F 50V 103-Z
C682	31607-401-710	CED4W TAPG 25V 470M-M
C686	31607-401-435	CE04W TAPG 16V 10M-M
C687	31607-401-435	CE04W TAPG 16V 10M-M
C701	31607-401-435	CE04W TAPG 16V 10M-M
C702	31607-401-435	CE04W TAPG 16V 10M-M
C703	31607-401-435	CE04W TAPG 16V 10M-M
C704	31607-401-435	CE04W TAPG 16V 10M-M
C705	31417-109-140	CK45 TAPG F 50V 103-Z
C706	31607-401-435	CE04W TAPG 16V 10M-M
C707	31607-401-435	CE04W TAPG 16V 10M-M
C708	31507-127-012	ECQ B1(V1)H 104J F3(Z3)
C709	31607-401-470	CE04W TAPG 16V 100M VENT
C710	31417-344-104	CK45 TAPG F 50V 104-Z
C711	31607-401-470	CE04W TAPG 16V 100M VENT
C790	31607-803-730	CE04W TAPG 50V 4.7M-NP
C901	31407-047-271	CC45(T) RH 50V 271-J
C902	31407-105-120	CC45(T) CH 50V 121-J
C903	31407-106-380	CC45(T) RH 50V 181-J
C904	31417-104-170	CK45 TAPG B 50V 821-K
C905	31417-104-170	CK45 TAPG B 50V 821-K
C906	31417-104-170	CK45 TAPG B 50V 821-K
**C907	A1100-0783	CK 45F 3KV 103-Z CK45FZ3
C908	31607-403-450	CE04W TAPG 250V 1M
C909	31607-401-470	CE04W TAPG 16V 100M VENT
C910	31607-402-250	CE04W TAPG 50V 10M
C911	31607-403-480	CE04W TAPG 250V 4.7M-M
RC01	31407-105-700	CC45(T) CH 50V 151-J
RC02	31507-127-001	ECQ B1 H 152J F3
RC03	31507-127-012	ECQ B1(V1)H 104J F3(Z3)
RC04	31507-127-012	ECQ B1(V1)H 104J F3(Z3)
RC05	31607-402-250	CE04W TAPG 50V 10M
RC06	31417-109-140	CK45 TAPG F 50V 103-Z
RC07	31607-401-470	CE04W TAPG 16V 100M VENT
RC08	31607-401-435	CE04W TAPG 16V 10M-M
RC09	31607-401-435	CE04W TAPG 16V 10M-M
RC10	31607-401-435	CE04W TAPG 16V 10M-M
RC11	31607-401-435	CE04W TAPG 16V 10M-M
RC12	31607-401-435	CE04W TAPG 16V 10M-M
RC13	31507-127-002	ECQ B1H 222J F3
RC15	31407-052-509	CC45(T) CH 50V 050-C
RC16	31407-105-270	CC45(T) CH 50V 300-J
RC17	31407-105-150	CC45(T) CH 50V 160-J

Loc No	Supplier Parts No	Specification
RC18	31407-105-150	CC45(T) CH 50V 160-J
RC19	31507-127-011	ECQ B1H 683J F3
RC20	31417-109-140	CK45 TAPG F 50V 103-Z
RC21	31607-401-450	CE04W TAPG 16V 33M
RC22	31417-104-400	CK45 TAPG B 50V 102-K
RC23	31607-401-470	CE04W TAPG 16V 100M VENT
RC24	31417-109-140	CK45 TAPG F 50V 103-Z
**RCT01	31497-009-440	EXF-FP5 331MDV(6P 331)
**RCT02	31497-009-430	EXF-FP3 331MDV(4P 331)
**RCT03	31497-009-350	EXF-FP7 331MDV(8P 331)
TC01	31507-127-012	ECQ B1(V1)H 104J F3(Z3)
TC02	31407-105-090	CC45(T) CH 50V 100-C
TC03	31407-057-151	CC45 TAPG CH 50V 150-J
TC04	31507-137-001	ECQ-B 1 102J F3
TC05	31507-127-012	ECQ B1(V1)H 104J F3(Z3)
TC06	31507-127-012	ECQ B1(V1)H 104J F3(Z3)
TC07	31507-127-012	ECQ B1(V1)H 104J F3(Z3)
TC08	31507-127-012	ECQ B1(V1)H 104J F3(Z3)
TC09	31507-127-012	ECQ B1(V1)H 104J F3(Z3)
TC11	31607-401-435	CE04W TAPG 16V 10M-M
	TRANSISTORS	
**IC101	B4012-0188	TDA8362B/N3 DIP
IC201	32119-101-010	TEA2014A
IC501	32119-110-089	TDA4661
IC502	32119-110-053	TDA8395
IC681	32119-102-390	UPC 1406 HA
IC701	32119-201-310	TC4053BP
IC702	32119-201-310	TC4053BP
RD11	32119-101-360	KA 33V(TAPG)
**RIC01	B4002-0339	TMS73C127 CTV SDIP
RIC02	32109-210-020	24C04A/P
RIC03	32119-110-061	KIA7033P(T)
**TIC01	B4012-0181	SAA5254 DIP EUROPE-TTX
	TRANSISTORS	
MQ01	32137-301-720	KSC 815-Y(TAPG)/YTAM
MQ02	32137-301-720	KSC 815-Y(TAPG)/YTAM
**MQ03	A4052-0057	KSA614-Y 25W -3A -80V SI
Q101	32137-301-090	2SC388ATM(TAPG)
Q102	32137-401-530	KSA 539-Y(TAPG)/YTAM
Q103	32137-401-530	KSA 539-Y(TAPG)/YTAM
Q104	32137-401-530	KSA 539-Y(TAPG)/YTAM
Q105	32137-401-530	KSA 539-Y(TAPG)/YTAM
Q201	32137-301-720	KSC 815-Y(TAPG)/YTAM
Q251	32137-301-720	KSC 815-Y(TAPG)/YTAM
Q601	32137-301-720	KSC 815-Y(TAPG)/YTAM
Q602	32137-301-720	KSC 815-Y(TAPG)/YTAM
Q603	32137-301-720	KSC 815-Y(TAPG)/YTAM
Q701	32137-301-720	KSC 815-Y(TAPG)/YTAM
**Q901	B4052-0046	2SC4544(M)2W 100MA 70MHZ
**Q902	B4052-0046	2SC4544(M)2W 100MA 70MHZ
**Q903	B4052-0046	2SC4544(M)2W 100MA 70MHZ
Q905	32137-401-530	KSA 539-Y(TAPG)/YTAM
Q907	32137-401-530	KSA 539-Y(TAPG)/YTAM
Q908	32137-401-530	KSA 539-Y(TAPG)/YTAM

Loc No	Supplier Parts No	Specification
Q909	32137-401-530	KSA 539-Y(TAPG)/YTAM
RQ01	32137-301-720	KSC 815-Y(TAPG)/YTAM
RQ02	32137-301-720	KSC 815-Y(TAPG)/YTAM
RQ03	32137-301-720	KSC 815-Y(TAPG)/YTAM
RQ05	32137-301-720	KSC 815-Y(TAPG)/YTAM
RQ06	32137-301-720	KSC 815-Y(TAPG)/YTAM
RQ07	32137-301-720	KSC 815-Y(TAPG)/YTAM
RQ08	32137-301-720	KSC 815-Y(TAPG)/YTAM
RQ09	A4052-0057	KSA614-Y 25W -3A -80V SI
	DIODES	
D101	32167-406-260	MTZ8.2
D102	32167-406-040	MTZ 3.6A
D103	32167-406-260	MTZ8.2
D104	32167-406-260	MTZ8.2
D105	32167-406-260	MTZ8.2
D106	32167-406-260	MTZ8.2
D201	32167-406-260	MTZ8.2
D210	32167-406-480	1N4148 TAPG
D302	32167-406-480	1N4148 TAPG
**D408	32167-406-480	1N4148 TAPG
**D409	32167-406-480	1N4148 TAPG
D501	32167-406-480	1N4148 TAPG
D502	32167-406-480	1N4148 TAPG
D503	32167-201-070	1N 4003/LTIN 4003
D504	32167-406-080	MTZ 5.1B
D505	32167-201-070	1N 4003/LTIN 4003
D506	32167-406-080	MTZ 5.1B
D510	32167-406-040	MTZ 3.6A
**D811	32167-201-070	1N 4003/LTIN 4003
D901	32167-201-070	1N 4003/LTIN 4003
RD01	32167-406-480	1N4148 TAPG
RD02	32167-406-480	1N4148 TAPG
RD05	32167-406-480	1N4148 TAPG
RD08	32167-406-480	1N4148 TAPG
RD09	32167-406-480	1N4148 TAPG
RD10	32167-406-480	1N4148 TAPG
RD12	32167-406-480	1N4148 TAPG
RD13	32167-406-480	1N4148 TAPG
RD16	32167-406-480	1N4148 TAPG
RD17	32167-406-480	1N4148 TAPG
RD18	32167-406-480	1N4148 TAPG
RD19	32167-401-800	EQA02-06A/MTZ5.6B(TAPG)
RD20	32167-406-480	1N4148 TAPG
TD01	32167-406-480	1N4148 TAPG
TD02	32167-406-480	1N4148 TAPG
TD03	32167-406-480	1N4148 TAPG
TD04	32167-406-480	1N4148 TAPG
TD06	32167-406-480	1N4148 TAPG
	COILS	
**D-COIL	A1149-0006	29INCH 25OHM T91 L3120MM
L101	32427-904-918	AL02-1R0K
L102	32427-904-919	AL02-1R2K
L104	32427-904-919	AL02-1R2K
L201	32427-904-924	AL02-100K(10UH)
L501	32427-904-930	AL02-101K
L601	32427-904-924	AL02-100K(10UH)
L603	32427-904-924	AL02-100K(10UH)
L604	32427-904-924	AL02-100K(10UH)
L605	32427-904-924	AL02-100K(10UH)
L651	32427-904-924	AL02-100K(10UH)
L652	32427-904-924	AL02-100K(10UH)
L653	32427-904-924	AL02-100K(10UH)
L654	32427-904-924	AL02-100K(10UH)
RL01	32427-904-924	AL02-100K(10UH)
RL02	32427-904-924	AL02-100K(10UH)
RL03	32427-904-924	AL02-100K(10UH)
RL04	32427-904-924	AL02-100K(10UH)
RL05	32427-904-924	AL02-100K(10UH)
RL06	32427-805-550	47UH-K TAPG
TL01	32427-904-700	3.9UH-K TAPG
	TRANS	
T101	32717-513-800	38.9MHZ(S-60)
	SOCKET-CRT	
**V999	33356-063-680	HF-29.1S ST
	TUNER	
**TU001	34519-600-017	TECC-2989VA15A
	FILTERS	
Z101	34529-440-013	OFWG1956M
Z201	B1243-0052	TR 5.5M TPS5.5MWATF21
Z202	34527-460-008	TPS6.0MBTF21
Z601	34527-460-030	SFSH5.5MCB-TF21
	CRYSTALS	
RX01	34537-001-003	4.0MHZ
TX01	B1280-0090	27MHZ(30006) HC-49/U-A
X501	34537-011-010	4.433619MHZ(00262) HC-49
	SWITCHES	
SW02	B3018-0034	EVQ-PB1-05K 7.5X7.1MM G
SW03	B3018-0034	EVQ-PB1-05K 7.5X7.1MM G
SW04	B3018-0034	EVQ-PB1-05K 7.5X7.1MM G
SW05	B3018-0034	EVQ-PB1-05K 7.5X7.1MM G
SW06	B3018-0034	EVQ-PB1-05K 7.5X7.1MM G
SW07	B3018-0034	EVQ-PB1-05K 7.5X7.1MM G
	MISCELLANEOUS	
CN601	33050-101-895	Y4XY4/1185X2/100
CN01	33050-104-100	YJN250-10-50
CN02	33050-104-100	YJN250-10-50
CN03	33050-104-100	YJN250-10-50
CRT1	33054-834-017	P1XP1 DIW1617#22 600MM
GT01	33054-834-017	P1XP1 DIW1617#22 600MM
GT02	33054-834-017	P1XP1 DIW1617#22 600MM
CNC04A	33058-009-020	S5XS5/F/500
CN05A	33058-017-020	S6XS6/F/500
CRTG2	33124-111-100	1P AUTO
CRTGND	33124-111-100	1P AUTO

Loc No	Supplier Parts No	Specification
CTGND1	33124-111-100	1P AUTO
FBTGND	33124-111-100	1P AUTO
GT01	33124-111-100	1P AUTO
GT02	33124-111-100	1P AUTO
JA01	33134-103-050	(HXC-1510-01-300A)X2
HOLD/C	33321-0018-000	ABS V0 GRY CT-6335
CN06	33344-112-660	5267-06
CN901	33344-112-660	5267-06
CNC04	33347-108-180	67094-005 (AUTO)
CN402	33347-114-810	YW025-04(AUTO)
CN601	33347-114-810	YW025-04(AUTO)
122	34503-0021-000	A/P90(G) T0.05 WHT
FBT/C	36633-101-910	ABS V0 GRAY ALL MODEL
PM+HC	37154-101-210	2S-3X10 FE FZY
PP+HC	37154-101-210	2S-3X10 FE FZY
KMOB-M	37624-623-611	ABS HB BLK

ASSY-ACCESSORY

I/B(D)	34709-0471-000	A/P120(G) P-70 TTX DUT
I/B(F)	34709-0472-000	A/P120(G) P-70 TTX FRE
BATT	34719-035-410	AAM-1.5V(R6)
SVC/N	38134-379-010	ART PAPER 100
PE-BAG	38653-108-161	HDPE T0.015 400X230 NO
W/CARD	A0120-2000	EC(12) 18850X105

ASSY-PWB POWER

*3E50-10033-010 CF6835T P70

PWB	36029-0033-000	T1.6 W330 L197 〈S.N.A〉
	RESISTORS	
PR02	31018-377-822	RD 1/2T 8.2K-J
PR03	31018-377-392	RD 1/2T 3.9K-J
PR04	31018-377-183	RD 1/2T 18K-J
**PR05	A1000-0587	RD 1/2 T(S) 512-J 5.1K
**PR07	A1000-0630	RD 1/2 T(S) 201-J
PR08	31018-377-183	RD 1/2T 18K-J
PR09	31018-377-104	RD 1/2T 100K-J
**PR10	A1000-0643	RD 1/2 T(S) 242-J 2.4K
**PR11	A1000-0587	RD 1/2 T(S) 512-J 5.1K
**PR12	A1000-0630	RD 1/2 T(S) 201-J
PR13	31018-377-152	RD 1/2T 1.5K-J
PR14	31018-377-272	RD 1/2T 2.7K-J
PR15	31018-377-361	RD 1/2P 360-J
**PR16	A1000-0390	RD 1/2 T(S) 222-J 2.2K
PR17	31018-377-622	RD 1/2T 6.2K-J
PR18	31018-377-223	RD 1/2T 22K-J
PR19	31018-377-272	RD 1/2T 2.7K-J
PR20	31018-377-682	RD 1/2T 6.8K-J
**PR21	A1000-0390	RD 1/2 T(S) 222-J 2.2K
**PR22	31046-567-271	RS 2T 270-J(AUTO)
R304	31018-377-102	RD 1/2T 1K-J
R305	31018-377-432	RD 1/2T 4.3K-J
R306	31018-377-432	RD 1/2T 4.3K-J
R308	31018-377-102	RD 1/2T 1K-J
R309	31018-377-331	RD 1/2T 330-J
**R310	31046-467-431	RS 1T 430-J(AUTO)

Loc No	Supplier Parts No	Specification
**R311	31046-567-271	RS 2T 270-J(AUTO)
**R313	31046-567-101	RS 2T 100-J(AUTO)
R314	31018-377-273	RD 1/2T 27K-J
**R315	A1000-0633	RD 1/2 T(S) 112-J 1.1K
**R316	A1000-0642	RD 1/2 T(S) 203-J 20K
**R317	A1000-0652	RD 1/2 T(S) 912-J 9.1K
**R318	A1006-0742	RM 1/2 T(S) 1R3-F 1.3R
**R319	A1006-0742	RM 1/2 T(S) 1R3-F 1.3R
R406	31018-377-221	RD 1/2T 220-J
**R407	A1004-0367	RS 2 T(S) 301-J 300R
**R408	31046-567-680	RS 2T 68-J(AUTO)
R409	31018-377-688	RD 1/2T 0.68-J
R410	31018-377-470	RD 1/2T 47-J
R411	31018-377-391	RD 1/2T 390-J
**R413	31057-002-130	RF 1/2T 0.47-K
**R414	31057-002-130	RF 1/2T 0.47-K
R415	31018-377-152	RD 1/2T 1.5K-J
**R416	31049-375-913	RM 1/2T 91K-F
R417	31018-377-102	RD 1/2T 1K-J
**R418	31049-375-913	RM 1/2T 91K-F
**R419	31059-004-019	RF 2P 1.9-J
**R422	31046-567-220	RS 2T 22-J(AUTO)
R425	31018-377-688	RD 1/2T 0.68-J
**R426	A1010-0031	RF 2 P 100-J 10R
**R801	31028-378-335	RC 1/2T 3.3M-K
R803	31018-377-224	RD 1/2T 220K-J
R804	31018-377-224	RD 1/2T 220K-J
R805	31018-377-223	RD 1/2T 22K-J
**R807	31035-578-108	MPC 71 0.1-K
R808	31018-377-221	RD 1/2T 220-J
**R809	31039-567-200	RW 5H 20-J
**R810	31039-567-200	RW 5H 20-J
R811	31018-377-680	RD 1/2T 68-J
R812	31018-377-221	RD 1/2T 220-J
**R813	A1000-0407	RD 1/2 T(S) 821-J 820R
**R814	31028-428-475	RC 1/2T 4.7M-K
**R815	31028-428-475	RC 1/2T 4.7M-K
**R816	31057-002-130	RF 1/2T 0.47-K
**R819	31046-467-163	RS 1T 16K-J(AUTO)
**R820	31057-002-130	RF 1/2T 0.47-K
R821	31018-377-753	RD 1/2T 75K-J
**R822	A1000-0390	RD 1/2 T(S) 222-J 2.2K
R823	31018-377-102	RD 1/2T 1K-J
R825	31018-377-753	RD 1/2T 75K-J
R826	31018-377-103	RD 1/2T 10K-J
R827	31018-377-102	RD 1/2T 1K-J
R828	31018-377-102	RD 1/2T 1K-J
R829	31018-377-103	RD 1/2T 10K-J
R830	31018-377-102	RD 1/2T 1K-J
R831	31018-377-473	RD 1/2T 47K-J
R832	31018-377-473	RD 1/2T 47K-J
R833	31018-377-472	RD 1/2T 4.7K-J
R834	31018-377-473	RD 1/2T 47K-J
**R835	31057-002-130	RF 1/2T 0.47-K
**R836	A1000-0586	RD 1/2 T(S) 202-J 2K
**R850	A1014-0060	RWC 7 I 5R6-J 5.6R
RR79	31018-377-561	RD 1/2T 560-J

Loc No	Supplier Parts No	Specification
RR80	31018-377-561	RD 1/2T 560-J
RR88	31018-377-223	RD 1/2T 22K-J
RR89	31018-377-220	RD 1/2T 22-J
SR601	31018-177-391	RD 1/8T 390-J
SR602	31018-177-391	RD 1/8T 390-J
**SR603	A1000-0390	RD 1/2 T(S) 222-J 2.2K
SR603	31018-177-222	RD 1/8T 2.2K-J
**SR604	31039-687-109	RW 7H 1-J
SR605	31018-377-399	RD 1/2T 3.9-J
SR606	31018-377-399	RD 1/2T 3.9-J
SR607	31018-177-183	RD 1/8T 18K-J
SR608	31018-177-183	RD 1/8T 18K-J
TR15	31018-377-103	RD 1/2T 10K-J
TR16	31018-377-472	RD 1/2T 4.7K-J
	VARIABLE RESISTORS	
PVR01	31249-128-002	EVN DJA A03 B24
PVR02	31249-128-002	EVN DJA A03 B24
PVR03	31249-128-003	EVN DJA A03 B23
VR301	31249-128-006	EVN DJA A03 B22
VR302	31249-128-004	EVN DJA A03 B13
VR801	31249-128-011	EVN DJA A03 B52
	CAPACITORS	
C304	31507-127-006	ECQ B1 H 103J F3
C305	31507-137-003	ECQ-B 1 152J F3
C306	31507-127-006	ECQ B1 H 103J F3
C307	31607-402-290	CE04W TAPG 50V 100M-M
C308	31607-402-110	CE04W TAPG 35V 220M-M
C309	31417-109-140	CK45 TAPG F 50V 103-Z
C310	31517-007-004	ECQ-V1 104J F3/2E 100V
C311	31607-402-490	CE04W TAPG 35V 2200M-M
C312	31607-402-210	CE04W TAPG 50V 1M
C313	31607-402-160	CE04W TAPG 50V 0.33UF
C405	31507-137-014	ECQ-B 1 153J F3
**C406	31509-391-050	CQ922M 1600V 0.01M-J
**C407	31509-339-030	CQ922M 800V 0.018-J
**C408	A1102-0274	CF 922 P 400V 274-J -25
C409	31507-137-001	ECQ-B 1 102J F3
C410	31507-127-010	ECQ B1H 473J F3
C411	31517-390-502	CFS922M TAPG 250V 104-J
C412	31607-401-720	CE04W TAPG 25V 1000M-M
C413	31417-901-400	CK45(T) B2KV 561-K
**C414	31609-402-350	CE04W 50V 2200M-VENT
C415	31417-901-400	CK45(T) B2KV 561-K
C417	31417-901-400	CK45(T) B2KV 561-K
**C418	A1104-0491	CE 04 C 250V T 470-M SG
C419	31607-401-500	CE04W TAPG 16V 470M-M
C420	31507-121-920	CQ921M TAPG 100V 0.1U-M
**C801	31569-204-190	250V 0.47M/KNB 1530
**C802	31569-204-190	250V 0.47M/KNB 1530
**C803	31569-204-190	250V 0.47M/KNB 1530
**C804	A1104-0538	CE 04 C 400V 471-M FL
**C806	31469-504-060	ECK-DNS472MEX/E400V 472
**C807	31469-504-060	ECK-DNS472MEX/E400V 472
**C808	31469-504-060	ECK-DNS472MEX/E400V 472
C809	31417-901-400	CK45(T) B2KV 561-K

Loc No	Supplier Parts No	Specification
C810	31607-402-710	CE04W TAPG 35V 1000M-M
C811	31417-901-400	CK45(T) B2KV 561-K
**C812	31609-979-003	CE04W 250V 680M-M(25X50)
C813	31417-901-400	CK45(T) B2KV 561-K
C814	31607-401-770	CE04W TAPG 25V 2200M-M
C815	31417-901-400	CK45(T) B2KV 561-K
C816	31607-401-510	CE04W TAPG 16V 1000U-M
C817	31607-401-720	CE04W TAPG 25V 1000M-M
C820	31607-401-500	CE04W TAPG 16V 470M-M
C821	31607-402-710	CE04W TAPG 35V 1000M-M
C822	31607-401-500	CE04W TAPG 16V 470M-M
C825	31417-767-331	CK45(T) B2KV 331-K
C837	31507-127-012	ECQ B1(V1)H 104J F3(Z3)
C838	31507-127-012	ECQ B1(V1)H 104J F3(Z3)
C840	31507-127-012	ECQ B1(V1)H 104J F3(Z3)
C841	31507-127-012	ECQ B1(V1)H 104J F3(Z3)
C842	31517-390-502	CFS922M TAPG 250V 104-J
C843	31517-390-502	CFS922M TAPG 250V 104-J
C850	31607-401-435	CE04W TAPG 16V 10M-M
C854	31607-401-710	CED4W TAPG 25V 470M-M
PC01	31607-402-590	CE04W TAPG 50V 4.7U-M
PC02	31607-402-240	CE04W TAPG 50V 4.7M
PC03	31607-402-290	CE04W TAPG 50V 100M-M
**PC04	31609-803-340	CE04W 25V 6.8U-NF
RC26	31607-401-460	CE04W TAPG 16V 47M
SC601	31607-402-220	CE04W TAPG 50V 2.2M
SC602	31607-402-220	CE04W TAPG 50V 2.2M
SC603	31607-401-670	CE04W TAPG 25V 47M
SC604	31607-401-670	CE04W TAPG 25V 47M
SC605	31607-401-670	CE04W TAPG 25V 47M
SC606	31607-401-670	CE04W TAPG 25V 47M
SC607	31607-403-970	CE04W TAPG 25V 1000M-M
SC608	31507-127-012	ECQ B1(V1)H 104J F3(Z3)
SC609	31607-403-970	CE04W TAPG 25V 1000M-M
SC610	31507-127-012	ECQ B1(V1)H 104J F3(Z3)
SC611	31507-127-012	ECQ B1(V1)H 104J F3(Z3)
SC612	31607-402-710	CE04W TAPG 35V 1000M-M
	I C	
**IC401	A4008-0178	KA7812A TO-220AB
**IC801	A4010-0033	AH1202 SMPS-CONTROL SIP
IC804	32119-401-210	TL 431
**IC805	A4008-1092	KA7805A TO-220AB 1A
	TRANSISTORS	
PQ01	32137-401-530	KSA 539-Y(TAPG)/YTAM
PQ03	32137-301-720	KSC 815-Y(TAPG)/YTAM
PQ04	32137-301-720	KSC 815-Y(TAPG)/YTAM
PQ05	32137-301-720	KSC 815-Y(TAPG)/YTAM
PQ06	32137-401-530	KSA 539-Y(TAPG)/YTAM
**Q402	32137-301-560	KSC 2331-Y(TAPG)
**Q802	32137-301-720	KSC 815-Y(TAPG)/YTAM
**Q803	A4052-0057	KSA614-Y 25W -3A -80V SI
**Q804	32137-301-720	KSC 815-Y(TAPG)/YTAM
**Q806	A4052-0057	KSA614-Y 25W -3A -80V SI
**Q807	32137-301-720	KSC 815-Y(TAPG)/YTAM
**Q808	32137-301-720	KSC 815-Y(TAPG)/YTAM

Loc No	Supplier Parts No	Specification
RQ10	32137-401-530	KSA 539-Y(TAPG)/YTAM
RQ11	32137-401-530	KSA 539-Y(TAPG)/YTAM
TQ01	32137-301-720	KSC 815-Y(TAPG)/YTAM
	DIODES	
D301	32167-201-070	1N 4003/LTIN 4003
**D401	32167-201-070	1N 4003/LTIN 4003
**D402	32167-201-070	1N 4003/LTIN 4003
**D403	32169-101-210	BY228
**D404	32167-501-030	BYW96D
**D405	32167-208-550	ERC24-06
**D406	32167-208-550	ERC24-06
**D407	32167-208-550	ERC24-06
**D802	32167-441-009	MTZ7.5C
**D803	32167-403-780	MTZ15C
**D804	32167-406-480	1N4148 TAPG
**D805	32167-208-550	ERC24-06
**D806	32169-201-230	RU4AM
**D807	B4106-0126	R2K 170/200V 1.0MA T
**D808	32167-208-550	ERC24-06
**D809	32167-208-550	ERC24-06
**D810	32167-406-130	MTZ 9.1B
PD01	32167-401-780	EQA02-23A TAPG
PD02	32167-406-480	1N4148 TAPG
PD03	32167-406-480	1N4148 TAPG
PD04	32167-406-480	1N4148 TAPG
SD601	32167-406-480	1N4148 TAPG
SD602	32167-406-130	MTZ 9.1B
	VARISTOR	
**P801	A1330-0060	INR10D471K 470V 400MW
	POSISTOR	
**P802	32186-609-430	2C14R(D) ST
	THERMISTER	
**P803	32189-609-381	NTCS234/4.7
	MODULE REMOCON	
RP01	32196-411-020	ORC-04VRF(S)
	PHOTO-COUPLER	
**IC802	32309-024-040	LTV817B
	LEDS	
LD01	32309-110-230	DS2 (DL-ILR)/SL-5R
LD02	32309-110-230	DS2 (DL-ILR)/SL-5R
	COILS	
**L403	32449-730-001	22UH/2PIN
**L405	32449-412-602	1MH
**L801	32426-633-160	6MH-SQ1913 ST
**L802	32426-633-090	39MHX2(U) ST
**L803	B1160-0020	300UH-K R RS105 PI0.35
	TRANS-FLY BACK	
**T444	32859-200-013	FCR-25A005R
	TRANS	
**T401	32846-070-007	7.3MH/105UH ST
**T801	A1206-0055	P:90-280V S:155/26/14/10
	CORE-FERRITES	
L402	34047-019-060	3.5X6X1.0
L406	34047-019-060	3.5X6X1.0
L804	34047-019-060	3.5X6X1.0
L805	34047-019-060	3.5X6X1.0
L806	34047-019-060	3.5X6X1.0
L807	34047-019-060	3.5X6X1.0
	FUSE	
**F801	34709-830-060	S505 250V 3.15A 20MM
	MISCELLANEOUS	
CNP01	33058-103-100	BMW250-10
CNP02	33058-103-100	BMW250-10
CNP03	33058-103-100	BMW250-10
EYELET	33104-107-210	BST 2.8X2.0
EL01	33104-107-220	BSP 3.2X2.7(2.2)
EL02	33104-107-220	BSP 3.2X2.7(2.2)
EL03	33104-107-220	BSP 3.2X2.7(2.2)
EL04	33104-107-220	BSP 3.2X2.7(2.2)
EL05	33104-107-220	BSP 3.2X2.7(2.2)
EL06	33104-107-220	BSP 3.2X2.7(2.2)
EL07	33104-107-220	BSP 3.2X2.7(2.2)
EL08	33104-107-220	BSP 3.2X2.7(2.2)
EL09	33104-107-220	BSP 3.2X2.7(2.2)
EL10	33104-107-220	BSP 3.2X2.7(2.2)
EL11	33104-107-220	BSP 3.2X2.7(2.2)
EL12	33104-107-220	BSP 3.2X2.7(2.2)
EL13	33104-107-220	BSP 3.2X2.7(2.2)
EL14	33104-107-220	BSP 3.2X2.7(2.2)
GT-PIN	33124-111-100	1P AUTO
F801	33167-001-001	PFC 5000-0202
CNP04	33347-108-180	67094-005 (AUTO)
CNP601	33347-114-810	YW025-04(AUTO)
CNP602	33347-114-810	YW025-04(AUTO)
SW801	33526-401-002	JPW-2104 250V 5/80A
LED-G	36033-102-111	ABS HB BLK CX5323W/AMFX
L-WRNG	38114-103-320	ART PAPER 90(S)
	ASSY-H/SINK SOUND	
	*3H81-00240-000 31122-0017-010 TA8200AH	
**SIC601	32119-201-190	TA8200AH
H/SINK	31122-0017-010	A6063 EXTR WHT 〈S.N.A〉
SCREW	37158-230-101	2S-3X10 FE FZY 〈S.N.A〉
	ASSY-H/SINK VERT	
	*3H82-00540-000 31124-0015-000 RBV606	
**D801	32169-101-100	RBV-606
H/SINK	31124-0015-000	CUS1-1/2H T0.5 〈S.N.A〉

Loc No	Supplier Parts No	Specification
SCREW	37048-130-081	+M3X8 FE FZY 〈S.N.A〉
NUT/H	37208-113-001	1-M3 FE FZY 〈S.N.A〉
	ASSY-H/SINK, H-OUT	
	*3H82-00570-000	31122-0017-030 2SD1887Y
**Q401	32159-210-032	2SD1887YD
H/SINK	31122-0017-030	A6063 EXTR WHT 〈S.N.A〉
SCREW	37158-230-101	2S-3X10 FE FZY 〈S.N.A〉
WASHER	37334-105-910	SPC-1 T1.0 FZY-1 〈S.N.A〉
	ASSY-H/SINK VERT	
	*3H82-00580-000	31122-0017-050 TDA3654
**IC301	32119-110-016	TDA3654
H/SINK	31122-0017-050	A6063 EXTR WHT 〈S.N.A〉
BRKT	36614-241-510	SBHG-1 100 T1.0 〈S.N.A〉
SCREW	37158-230-081	2S-3X8FE FZY 〈S.N.A〉
	ASSY-H/SINK POWER	
	*3H83-00750-000	31122-0017-060 2SK1217
**Q801	B4054-0051	2SK1217-F153 100MW 8MA
H/SINK	31122-0017-060	A6063 EXTR WHT 〈S.N.A〉
SCREW	37158-230-101	2S-3X10 FE FZY 〈S.N.A〉
WASHER	37334-105-910	SPC-1 T1.0 FZY-1 〈S.N.A〉
	ASSY-H/SINK TR	
	*3H84-00210-001	KSC2073 STICK TO 220 AB
**Q805	A4052-0059	KSC2073 25W 1.5A 4MHZ
H/SINK	35684-118-390	A6063 EXTR WHT 〈S.N.A〉
SCREW	37158-230-061	2S-3X6 FE FZY 〈S.N.A〉
	ASSY-H/SINK TR	
	*3H84-00260-000	31122-0018-030 D73Y
**PQ07	A4052-0058	KSD73-Y 30W 5A 20MHZ 100
H/SINK	31122-0018-030	A6063 EXTR WHT 〈S.N.A〉
SCREW	37158-230-061	2S-3X6 FE FZY 〈S.N.A〉
	ASSY-TRANSMITTER	
	*3F14-00037-040	TM37,RM135-1,44,BLK,S/S
	ASSY-SPEAKER	
	*3H73-20540-000	06L91BRAX2 L700 R900 RG
LEAD/C	33058-111-101	Y4/F22/700,900
**SPK	34209-200-007	06L91BRA 5W 8R
	ASSY-POWER CORD	
	*3H64-00010-400	H/C400MM BLK-HOU NOR
PWR-C	33053-816-510	KKD-419C KLCE-2F,F,BLK
HOLD-C	33323-0001-000	PP V0 BLK

Loc No	Supplier Parts No	Specification

Loc No	Supplier Parts No	Specification

CX6835T/UKDSX(OPTION)

BUYER ; N S I ('94.09.05)

ASSY-PWB MAIN

Loc No	Supplier Parts No	Specification
	*3T30-02490-080	CX6835T/UKDSX

ASSY-ACCESSORY

Loc No	Supplier Parts No	Specification
I/B(E)	34709-0430-000	A/P120(G) RM135 6835
I/B(G)	34709-0474-000	A/P120(G) P-70 TTX GRE
I/B(D)	34709-0475-000	A/P120(G) P-70 TTX DEN
PE-BAG	38653-108-191	HDPE T0.015 230X400

CX6835T/UKMSX(OPTION)

BUYER ; S.E.G ('94.09.15)

ASSY-PWB MAIN

Loc No	Supplier Parts No	Specification
	*3T30-02490-100	CX6835T/UKMSX
L-Z,RAY	38114-526-730	ART-PAPER,FTZ

ASSY-POWER CORD

Loc No	Supplier Parts No	Specification
	*3H64-00020-450	H/C,450MM,BLK-HOU,GER
PWR/C	33053-816-702	KJP-140/LTCE-2F/8FT HOU

ASSY-ACCESSORY

Loc No	Supplier Parts No	Specification
I/B(E)	34709-0430-000	A/P120(G) RM135 6835
I/B(G)	34709-0474-000	A/P120(G) P-70 TTX GRE
C/FTZ	38124-121-320	ART PAPER 100,QUELLE
PE-BAG	38653-107-410	PE 0.05X141X197 340
PE-BAG	38653-108-191	HDPE T0.015 230X400

CX6835T/UKSSX(OPTION)

BUYER ; SECOSA ('94.09.05)

ASSY-PWB MAIN

Loc No	Supplier Parts No	Specification
	*3T30-02490-020	CX6835T/UKSSX
S-NOT	34509-0126-000	T/P90(G) T0.2 W3.5 L8.0

ASSY-ACCESSORY

Loc No	Supplier Parts No	Specification
I/B(S)	34709-0473-000	A/P120(G) P-70 TTX SPA
SVC/N	38134-434-510	A/P 120 SECOSA SPAIN
PE-BAG	38653-108-191	HDPE T0.015 230X400

CX6835T/UKWSX(OPTION)

BUYER ; SESAB ('94.09.05)

ASSY-PWB MAIN

Loc No	Supplier Parts No	Specification
	*3T30-02490-130	CX6835T/UKWSX

ASSY-ACCESSORY

Loc No	Supplier Parts No	Specification
I/B(E)	34709-0430-000	A/P120(G) RM135 6835
I/B(S)	34709-0538-000	A/P120(G) 6835,5935 SWE
PE-BAG	38653-108-191	HDPE T0.015 230X400

Loc No	Supplier Parts No	Specification

Electrical Parts List

ABBREVIATIONS :				
CC	C-CERAMIC		RC	R-COMPOSITION
CE	C-ELECTROLYTIC		RD	R-CARBON
CFS	C-M, POLYESTER		RF	R-FUSIBLE
CK	C-CERAMIC, HK		RM	R-METAL, FILM
CQ	C-POLYPROPYLENE, POLYESTE		RP	R-CEMENT WIRE
CS	C-TANTALIUM, SOLID		RS	R-METAL, OXIDE

NOTE : The items with "*" are usually out of stock since they are seldom required for the routine service. There may be some anticipated delay when you order these items.

S.N.A. = Service Not Available , L/C = Local Purchase

The components identified by mark '**' are critical for safety. Replace only with Supplier part number specified.

When indicating parts by location number, Please include the PWB names (PWB = Printed Writing Board)

Loc No	Supplier Parts No	Specification
	ASSY-PWB MAIN BUYER ; S.E.P ('94.09.05)	
	*3T30-02492-040	CX6835Z/UKGSX
PWB	36029-0032-000	T1.6 W330 L245 〈S.N.A〉
	RESISTORS	
J090	31018-177-223	RD 1/8T 22K-J
MR01	31018-177-332	RD 1/8T 3.3K-J
MR02	31018-177-103	RD 1/8T 10K-J
MR03	31018-177-102	RD 1/8T 1K-J
R101	31018-177-101	RD 1/8T 100-J
R102	31018-177-562	RD 1/8T 5.6K-J
R103	31018-177-102	RD 1/8T 1K-J
R104	31018-177-102	RD 1/8T 1K-J
R105	31018-177-101	RD 1/8T 100-J
R106	31018-177-330	RD 1/8T 33-J
R107	31018-377-101	RD 1/2T 100-J
R108	31018-177-682	RD 1/8T 6.8K-J
R109	31018-177-333	RD 1/8T 33K-J
R110	31018-177-473	RD 1/8T 47K-J
R111	31018-177-473	RD 1/8T 47K-J
R112	31018-177-104	RD 1/8T 100K-J
R113	31018-177-101	RD 1/8T 100-J
R114	31018-177-104	RD 1/8T 100K-J
R115	31018-177-104	RD 1/8T 100K-J
R116	31018-177-102	RD 1/8T 1K-J
R117	31018-177-562	RD 1/8T 5.6K-J
R118	31018-177-561	RD 1/8T 560-J
R119	31018-177-562	RD 1/8T 5.6K-J
R120	31018-177-391	RD 1/8T 390-J
R121	31018-177-472	RD 1/8T 4.7K-J
R201	31018-177-102	RD 1/8T 1K-J
R202	31018-177-109	RD 1/8T 1-J
R203	31018-377-470	RD 1/2T 47-J
**R204	A1006-0382	RD 1/2 T(S) 181-J
R205	31018-177-131	RD 1/8T 130-J
R206	31018-177-102	RD 1/8T 1K-J

Loc No	Supplier Parts No	Specification
R207	31018-377-100	RD 1/2T 10-J
R209	31018-177-750	RD 1/8T 75-J
R210	31018-177-222	RD 1/8T 2.2K-J
**R210	A1000-0390	RD 1/2 T(S) 222-J 2.2K
R211	31018-177-750	RD 1/8T 75-J
R212	31018-177-102	RD 1/8T 1K-J
R251	31018-177-473	RD 1/8T 47K-J
R252	31018-177-333	RD 1/8T 33K-J
R253	31018-177-102	RD 1/8T 1K-J
R254	31018-177-750	RD 1/8T 75-J
R255	31018-177-750	RD 1/8T 75-J
R301	31018-377-105	RD 1/2T 1M-J
R302	31018-177-331	RD 1/8T 330-J
R303	31018-177-100	RD 1/8T 10-J
R401	31018-177-153	RD 1/8T 15K-J
R402	31018-177-824	RD 1/8T 820K-J
R403	31018-177-101	RD 1/8T 100-J
R404	31018-177-332	RD 1/8T 3.3K-J
R405	31018-177-100	RD 1/8T 10-J
R420	31018-177-273	RD 1/8T 27K-J
R501	31018-177-104	RD 1/8T 100K-J
R502	31018-177-473	RD 1/8T 47K-J
R503	31018-177-182	RD 1/8T 1.8K-J
R504	31018-177-182	RD 1/8T 1.8K-J
R505	31018-177-182	RD 1/8T 1.8K-J
R506	31018-177-912	RD 1/8T 9.1K-J
R507	31018-177-103	RD 1/8T 10K-J
R508	31018-377-824	RD 1/2T 820K-J
R509	31018-377-101	RD 1/2T 100-J
R510	31018-177-103	RD 1/8T 10K-J
R512	31018-177-822	RD 1/8T 8.2K-J
R513	31018-177-102	RD 1/8T 1K-J
R514	31018-177-750	RD 1/8T 75-J
R515	31018-177-391	RD 1/8T 390-J
R516	31018-177-392	RD 1/8T 3.9K-J
R517	31018-177-750	RD 1/8T 75-J
R518	31018-177-391	RD 1/8T 390-J
R519	31018-177-392	RD 1/8T 3.9K-J
R520	31018-177-750	RD 1/8T 75-J

Loc No	Supplier Parts No	Specification
R521	31018-177-391	RD 1/8T 390-J
R522	31018-177-392	RD 1/8T 3.9K-J
R523	31018-177-750	RD 1/8T 75-J
R530	31018-177-100	RD 1/8T 10-J
R601	31018-177-183	RD 1/8T 18K-J
R602	31018-177-103	RD 1/8T 10K-J
R603	31018-177-103	RD 1/8T 10K-J
R604	31018-177-202	RD 1/8T 2K-J
R605	31018-177-472	RD 1/8T 4.7K-J
R606	31018-177-472	RD 1/8T 4.7K-J
R607	31018-177-183	RD 1/8T 18K-J
R608	31018-177-113	RD 1/8T 11K-J
R609	31018-177-220	RD 1/8T 22-J
R620	31018-177-102	RD 1/8T 1K-J
R652	31018-177-221	RD 1/8T 220-J
R653	31018-177-221	RD 1/8T 220-J
R666	31018-177-622	RD 1/8T 6.2K-J
R667	31018-177-622	RD 1/8T 6.2K-J
R668	31018-177-622	RD 1/8T 6.2K-J
R669	31018-177-622	RD 1/8T 6.2K-J
R679	31018-177-563	RD 1/8T 56K-J
R680	31018-177-563	RD 1/8T 56K-J
R681	31018-177-472	RD 1/8T 4.7K-J
R682	31018-177-472	RD 1/8T 4.7K-J
R701	31018-377-470	RD 1/2T 47-J
R702	31018-177-103	RD 1/8T 10K-J
R703	31018-177-102	RD 1/8T 1K-J
R704	31018-377-470	RD 1/2T 47-J
R707	31018-177-103	RD 1/8T 10K-J
R901	31018-177-152	RD 1/8T 1.5K-J
R902	31018-177-152	RD 1/8T 1.5K-J
R903	31018-177-152	RD 1/8T 1.5K-J
R904	31018-177-751	RD 1/8T 750-J
R905	31018-177-751	RD 1/8T 750-J
R906	31018-177-751	RD 1/8T 750-J
R907	31018-177-102	RD 1/8T 1K-J
R908	31018-177-102	RD 1/8T 1K-J
R909	31018-177-102	RD 1/8T 1K-J
R910	31018-327-222	RD 1/2P 2.2K-J
R911	31018-177-181	RD 1/8T 180-J
R913	31018-177-561	RD 1/8T 560-J
R914	31018-177-561	RD 1/8T 560-J
R915	31018-377-104	RD 1/2T 100K-J
R916	31018-377-104	RD 1/2T 100K-J
R917	31018-377-104	RD 1/2T 100K-J
**R918	31046-567-183	RS 2T 18K-J(AUTO)
**R919	31046-567-183	RS 2T 18K-J(AUTO)
**R920	31046-567-183	RS 2T 18K-J(AUTO)
**R921	31028-328-272	RC 1/2T 2.7K-K
**R922	31028-328-272	RC 1/2T 2.7K-K
**R923	31028-328-272	RC 1/2T 2.7K-K
**R924	31059-004-019	RF 2P 1.9-J
R926	31018-177-472	RD 1/8T 4.7K-J
R927	31018-177-472	RD 1/8T 4.7K-J
R928	31018-177-472	RD 1/8T 4.7K-J
R929	31018-377-105	RD 1/2T 1M-J

Loc No	Supplier Parts No	Specification
RR01	31018-177-103	RD 1/8T 10K-J
RR02	31018-177-103	RD 1/8T 10K-J
RR03	31018-377-103	RD 1/2T 10K-J
RR04	31018-177-103	RD 1/8T 10K-J
RR05	31018-177-103	RD 1/8T 10K-J
RR06	31018-177-113	RD 1/8T 11K-J
**RR07	31046-567-123	RS 2T 12K-J(AUTO)
RR08	31018-177-242	RD 1/8T 2.4K-J
RR09	31018-177-333	RD 1/8T 33K-J
RR10	31018-177-120	RD 1/8T 12-J
RR12	31018-177-103	RD 1/8T 10K-J
RR13	31018-177-152	RD 1/8T 1.5K-J
RR14	31018-177-152	RD 1/8T 1.5K-J
RR15	31018-177-202	RD 1/8T 2K-J
RR16	31018-177-911	RD 1/8T 910-J
RR17	31018-177-752	RD 1/8T 7.5K-J
RR18	31018-177-823	RD 1/8T 82K-J
RR19	31018-177-202	RD 1/8T 2K-J
RR20	31018-177-202	RD 1/8T 2K-J
RR21	31018-177-242	RD 1/8T 2.4K-J
RR22	31018-177-223	RD 1/8T 22K-J
RR23	31018-177-242	RD 1/8T 2.4K-J
RR24	31018-177-512	RD 1/8T 5.1K-J
RR25	31018-177-563	RD 1/8T 56K-J
RR26	31018-177-102	RD 1/8T 1K-J
RR27	31018-177-102	RD 1/8T 1K-J
RR30	31018-177-103	RD 1/8T 10K-J
RR31	31018-177-103	RD 1/8T 10K-J
RR32	31018-177-103	RD 1/8T 10K-J
RR35	31018-177-103	RD 1/8T 10K-J
RR36	31018-177-242	RD 1/8T 2.4K-J
RR37	31018-177-473	RD 1/8T 47K-J
RR38	31018-177-222	RD 1/8T 2.2K-J
RR39	31018-177-622	RD 1/8T 6.2K-J
RR40	31018-177-101	RD 1/8T 100-J
RR41	31018-177-122	RD 1/8T 1.2K-J
RR42	31018-177-122	RD 1/8T 1.2K-J
RR43	31018-177-102	RD 1/8T 1K-J
RR44	31018-177-102	RD 1/8T 1K-J
RR45	31018-177-102	RD 1/8T 1K-J
RR46	31018-177-102	RD 1/8T 1K-J
RR47	31018-177-102	RD 1/8T 1K-J
RR48	31018-177-681	RD 1/8T 680-J
RR49	31018-177-681	RD 1/8T 680-J
RR50	31018-177-203	RD 1/8T 20K-J
RR51	31018-177-102	RD 1/8T 1K-J
RR52	31018-177-103	RD 1/8T 10K-J
RR55	31018-177-101	RD 1/8T 100-J
RR56	31018-177-101	RD 1/8T 100-J
RR57	31018-177-101	RD 1/8T 100-J
RR58	31018-177-102	RD 1/8T 1K-J
RR59	31018-177-470	RD 1/8T 47-J
RR60	31018-177-472	RD 1/8T 4.7K-J
RR61	31018-177-473	RD 1/8T 47K-J
RR62	31018-177-472	RD 1/8T 4.7K-J
RR63	31018-177-104	RD 1/8T 100K-J
RR64	31018-177-244	RD 1/8T 240K-J

Loc No	Supplier Parts No	Specification
RR65	31018-177-102	RD 1/8T 1K-J
RR66	31018-177-223	RD 1/8T 22K-J
RR67	31018-177-102	RD 1/8T 1K-J
RR68	31018-177-123	RD 1/8T 12K-J
RR69	31018-177-822	RD 1/8T 8.2K-J
RR70	31018-177-123	RD 1/8T 12K-J
RR71	31018-177-822	RD 1/8T 8.2K-J
RR72	31018-177-103	RD 1/8T 10K-J
RR73	31018-177-222	RD 1/8T 2.2K-J
RR74	31018-177-222	RD 1/8T 2.2K-J
RR75	31018-177-101	RD 1/8T 100-J
RR76	31018-177-101	RD 1/8T 100-J
RR77	31018-177-102	RD 1/8T 1K-J
RR78	31018-177-473	RD 1/8T 47K-J
RR81	31018-177-223	RD 1/8T 22K-J
RR82	31018-177-103	RD 1/8T 10K-J
RR83	31018-177-101	RD 1/8T 100-J
RR84	31018-177-101	RD 1/8T 100-J
RR85	31018-177-473	RD 1/8T 47K-J
RR86	31018-177-102	RD 1/8T 1K-J
RR87	31018-177-103	RD 1/8T 10K-J
	VARIABLE RESISTORS	
VR101	31249-128-001	EVN DJA A03 B14
VR201	31249-128-008	EVN DJA A03 B54
VR401	31249-128-001	EVN DJA A03 B14
VR901	31249-128-004	EVN DJA A03 B13
VR902	31249-128-004	EVN DJA A03 B13
VR903	31249-128-004	EVN DJA A03 B13
VR904	31249-128-004	EVN DJA A03 B13
VR905	31249-128-004	EVN DJA A03 B13
	CAPACITORS	
C101	31417-109-140	CK45 TAPG F 50V 103-Z
C102	31417-109-140	CK45 TAPG F 50V 103-Z
C104	31417-109-140	CK45 TAPG F 50V 103-Z
C105	31607-401-470	CE04W TAPG 16V 100M VENT
C106	31607-402-070	CE04W TAPG 35V 22M
C107	31507-127-012	ECQ B1(V1)H 104J F3(Z3)
C108	31607-401-500	CE04W TAPG 16V 470M-M
C109	31607-402-210	CE04W TAPG 50V 1M
C110	31607-402-210	CE04W TAPG 50V 1M
C111	31607-402-200	CE04W TAPG 50V 0.47M
C112	31607-402-200	CE04W TAPG 50V 0.47M
C113	31607-902-250	CE04W TAPG 50V 0.22M
C114	31507-127-016	ECQ B1 H 472J F3
C115	31417-109-220	CK45 TAPG F 50V 223-Z
C116	31607-402-220	CE04W TAPG 50V 2.2M
C117	31507-127-012	ECQ B1(V1)H 104J F3(Z3)
C118	31507-127-012	ECQ B1(V1)H 104J F3(Z3)
C119	31607-402-220	CE04W TAPG 50V 2.2M
C120	31407-105-110	CC45 TAPG CH 50V 120-J
C121	31417-109-140	CK45 TAPG F 50V 103-Z
C130	31607-402-070	CE04W TAPG 35V 22M
**C130	A1104-0052	CE 04 -40/85 16V T 220-M
C201	31507-127-010	ECQ B1H 473J F3
C202	31607-401-435	CE04W TAPG 16V 10M-M

Loc No	Supplier Parts No	Specification
C203	31507-127-012	ECQ B1(V1)H 104J F3(Z3)
C204	31607-402-210	CE04W TAPG 50V 1M
C205	31507-127-012	ECQ B1(V1)H 104J F3(Z3)
C206	31607-401-480	CE04W TAPG 16V 220M-M
C207	31507-127-012	ECQ B1(V1)H 104J F3(Z3)
C208	31607-401-470	CE04W TAPG 16V 100M VENT
C209	31607-401-470	CE04W TAPG 16V 100M VENT
C210	31607-803-120	CE04W TAPG 16V 10u-NP
C211	31607-401-435	CE04W TAPG 16V 10M-M
C212	31607-401-435	CE04W TAPG 16V 10M-M
C213	31607-401-500	CE04W TAPG 16V 470M-M
C251	31607-401-435	CE04W TAPG 16V 10M-M
**C301	31517-007-004	ECQ-V1 104J F3
C302	31507-127-016	ECQ B1 H 472J F3
C401	31607-402-210	CE04W TAPG 50V 1M
C402	31507-127-002	ECQ B1H 222J F3
C403	31507-127-012	ECQ B1(V1)H 104J F3(Z3)
C404	31417-109-220	CK45 TAPG F 50V 223-Z
C501	31407-057-180	CC45(T) CH 50V 180-J
C502	31507-127-016	ECQ B1 H 472J F3
C503	31507-127-012	ECQ B1(V1)H 104J F3(Z3)
C504	31507-127-012	ECQ B1(V1)H 104J F3(Z3)
C505	31507-127-012	ECQ B1(V1)H 104J F3(Z3)
C506	31607-401-435	CE04W TAPG 16V 10M-M
C507	31507-127-012	ECQ B1(V1)H 104J F3(Z3)
C508	31507-127-012	ECQ B1(V1)H 104J F3(Z3)
C509	31507-127-012	ECQ B1(V1)H 104J F3(Z3)
C510	31607-401-435	CE04W TAPG 16V 10M-M
C511	31607-401-435	CE04W TAPG 16V 10M-M
C512	31507-127-008	ECQ B1 H 223J F3
C513	31607-401-460	CE04W TAPG 16V 47M
C514	31417-104-400	CK45 TAPG B 50V 102-K
C515	31417-104-400	CK45 TAPG B 50V 102-K
C516	31607-401-460	CE04W TAPG 16V 47M
C517	31507-127-008	ECQ B1 H 223J F3
C518	31507-127-012	ECQ B1(V1)H 104J F3(Z3)
C519	31507-127-024	ECQ-V1H 224J Z3
C520	31417-109-140	CK45 TAPG F 50V 103-Z
C601	31507-127-012	ECQ B1(V1)H 104J F3(Z3)
C602	31407-057-390	CC45(T) CH 50V 390-J
C603	31407-105-280	CC45(T) CH 50V 560-J
C604	31507-137-003	ECQ-B 1 152J F3
C605	31507-127-003	ECQ B1 H 332J F3
C606	31607-401-435	CE04W TAPG 16V 10M-M
**C608	31609-401-440	CE04W 16V 22M
**C608	A1104-0052	CE 04 -40/85 16V T 220-M
C610	31407-105-660	CC45(T) CH 50V 101-J
C611	31407-105-660	CC45(T) CH 50V 101-J
C612	31407-105-660	CC45(T) CH 50V 101-J
C632	31607-974-003	CE04W TAPG 50V 10M-M
C633	31607-974-003	CE04W TAPG 50V 10M-M
C652	31607-401-435	CE04W TAPG 16V 10M-M
C654	31607-401-435	CE04W TAPG 16V 10M-M
C655	31407-105-660	CC45(T) CH 50V 101-J
C656	31407-105-660	CC45(T) CH 50V 101-J
C657	31407-105-660	CC45(T) CH 50V 101-J

Loc No	Supplier Parts No	Specification
C658	31407-105-660	CC45(T) CH 50V 101-J
C681	31417-109-140	CK45 TAPG F 50V 103-Z
C682	31607-401-710	CED4W TAPG 25V 470M-M
C686	31607-401-435	CE04W TAPG 16V 10M-M
C687	31607-401-435	CE04W TAPG 16V 10M-M
C690	31607-803-730	CE04W TAPG 50V 4.7M-NP
C701	31607-401-435	CE04W TAPG 16V 10M-M
C702	31607-401-435	CE04W TAPG 16V 10M-M
C703	31607-401-435	CE04W TAPG 16V 10M-M
C704	31607-401-435	CE04W TAPG 16V 10M-M
C705	31417-109-140	CK45 TAPG F 50V 103-Z
C706	31607-401-435	CE04W TAPG 16V 10M-M
C707	31607-401-435	CE04W TAPG 16V 10M-M
C708	31507-127-012	ECQ B1(V1)H 104J F3(Z3)
C709	31607-401-470	CE04W TAPG 16V 100M VENT
C710	31417-344-104	CK45 TAPG F 50V 104-Z
C711	31607-401-470	CE04W TAPG 16V 100M VENT
C901	31407-047-271	CC45(T) RH 50V 271-J
C902	31407-105-120	CC45(T) CH 50V 121-J
C903	31407-106-380	CC45(T) RH 50V 181-J
C904	31417-104-170	CK45 TAPG B 50V 821-K
C905	31417-104-170	CK45 TAPG B 50V 821-K
C906	31417-104-170	CK45 TAPG B 50V 821-K
**C907	A1100-0783	CK 45F 3KV 103-Z CK45FZ3
C908	31607-403-450	CE04W TAPG 250V 1M
C909	31607-401-470	CE04W TAPG 16V 100M VENT
C910	31607-402-250	CE04W TAPG 50V 10M
C911	31607-403-480	CE04W TAPG 250V 4.7M-M
RC01	31407-105-700	CC45(T) CH 50V 151-J
RC02	31507-127-001	ECQ B1 H 152J F3
RC03	31507-127-012	ECQ B1(V1)H 104J F3(Z3)
RC04	31507-127-012	ECQ B1(V1)H 104J F3(Z3)
RC05	31607-402-250	CE04W TAPG 50V 10M
RC06	31417-109-140	CK45 TAPG F 50V 103-Z
RC07	31607-401-470	CE04W TAPG 16V 100M VENT
RC08	31607-401-435	CE04W TAPG 16V 10M-M
RC09	31607-401-435	CE04W TAPG 16V 10M-M
RC10	31607-401-435	CE04W TAPG 16V 10M-M
RC11	31607-401-435	CE04W TAPG 16V 10M-M
RC12	31607-401-435	CE04W TAPG 16V 10M-M
RC13	31507-127-002	ECQ B1H 222J F3
RC16	31407-105-270	CC45(T) CH 50V 300-J
RC17	31407-105-150	CC45(T) CH 50V 160-J
RC18	31407-105-150	CC45(T) CH 50V 160-J
RC19	31507-127-011	ECQ B1H 683J F3
RC20	31417-109-140	CK45 TAPG F 50V 103-Z
RC21	31607-401-450	CE04W TAPG 16V 33M
RC22	31417-104-400	CK45 TAPG B 50V 102-K
RC23	31607-401-470	CE04W TAPG 16V 100M VENT
RC24	31417-109-140	CK45 TAPG F 50V 103-Z
**RCT01	31497-009-440	EXF-FP5 331MDV(6P 331)
**RCT02	31497-009-430	EXF-FP3 331MDV(4P 331)
**RCT03	31497-009-350	EXF-FP7 331MDV(8P 331)
	TRANSISTORS	
**IC101	B4012-0188	TDA8362B/N3 DIP
IC201	32119-101-010	TEA2014A

Loc No	Supplier Parts No	Specification
IC501	32119-110-089	TDA4661
IC502	32119-110-053	TDA8395
IC681	32119-102-390	UPC 1406 HA
IC701	32119-201-310	TC4053BP
IC702	32119-201-310	TC4053BP
RD11	32119-101-360	KA 33V(TAPG)
**RIC01	B4002-0339	TMS73C127 SDIP SIM135
RIC02	32109-210-020	24C04A/P
RIC03	32119-110-061	KIA7033P(T)
	TRANSISTORS	
MQ01	32137-301-720	KSC 815-Y(TAPG)/YTAM
MQ02	32137-301-720	KSC 815-Y(TAPG)/YTAM
**MQ03	A4052-0057	KSA614-Y 25W -3A -80V SI
Q101	32137-301-090	2SC388ATM(TAPG)
Q102	32137-401-530	KSA 539-Y(TAPG)/YTAM
Q103	32137-401-530	KSA 539-Y(TAPG)/YTAM
Q104	32137-401-530	KSA 539-Y(TAPG)/YTAM
Q105	32137-401-530	KSA 539-Y(TAPG)/YTAM
Q201	32137-301-720	KSC 815-Y(TAPG)/YTAM
Q251	32137-301-720	KSC 815-Y(TAPG)/YTAM
Q601	32137-301-720	KSC 815-Y(TAPG)/YTAM
Q602	32137-301-720	KSC 815-Y(TAPG)/YTAM
Q603	32137-301-720	KSC 815-Y(TAPG)/YTAM
Q701	32137-301-720	KSC 815-Y(TAPG)/YTAM
**Q901	B4052-0046	2SC4544(M)2W 100MA 70MHZ
**Q902	B4052-0046	2SC4544(M)2W 100MA 70MHZ
**Q903	B4052-0046	2SC4544(M)2W 100MA 70MHZ
Q905	32137-401-530	KSA 539-Y(TAPG)/YTAM
Q907	32137-401-530	KSA 539-Y(TAPG)/YTAM
Q908	32137-401-530	KSA 539-Y(TAPG)/YTAM
Q909	32137-401-530	KSA 539-Y(TAPG)/YTAM
RQ01	32137-301-720	KSC 815-Y(TAPG)/YTAM
RQ02	32137-301-720	KSC 815-Y(TAPG)/YTAM
RQ03	32137-301-720	KSC 815-Y(TAPG)/YTAM
RQ05	32137-301-720	KSC 815-Y(TAPG)/YTAM
RQ06	32137-301-720	KSC 815-Y(TAPG)/YTAM
RQ07	32137-301-720	KSC 815-Y(TAPG)/YTAM
RQ08	32137-301-720	KSC 815-Y(TAPG)/YTAM
**RQ09	A4052-0057	KSA614-Y 25W -3A -80V SI
	DIODES	
D101	32167-406-260	MTZ8.2
D102	32167-406-040	MTZ 3.6A
D103	32167-406-260	MTZ8.2
D104	32167-406-260	MTZ8.2
D105	32167-406-260	MTZ8.2
D106	32167-406-260	MTZ8.2
D201	32167-406-260	MTZ8.2
D210	32167-406-480	1N4148 TAPG
D302	32167-406-480	1N4148 TAPG
**D408	32167-406-480	1N4148 TAPG
**D409	32167-406-480	1N4148 TAPG
D501	32167-406-480	1N4148 TAPG
D502	32167-406-480	1N4148 TAPG
D503	32167-201-070	1N 4003/LTIN 4003
D504	32167-406-080	MTZ 5.1B

Loc No	Supplier Parts No	Specification
D505	32167-201-070	1N 4003/LTIN 4003
D506	32167-406-080	MTZ 5.1B
D510	32167-406-040	MTZ 3.6A
**D811	32167-201-070	1N 4003/LTIN 4003
D901	32167-201-070	1N 4003/LTIN 4003
RD02	32167-406-480	1N4148 TAPG
RD08	32167-406-480	1N4148 TAPG
RD09	32167-406-480	1N4148 TAPG
RD10	32167-406-480	1N4148 TAPG
RD12	32167-406-480	1N4148 TAPG
RD13	32167-406-480	1N4148 TAPG
RD16	32167-406-480	1N4148 TAPG
RD17	32167-406-480	1N4148 TAPG
RD18	32167-406-480	1N4148 TAPG
RD19	32167-401-800	EQA02-06A/MTZ5.6B(TAPG)
RD20	32167-406-480	1N4148 TAPG
	COILS	
**D-COIL	A1149-0006	29INCH 25OHM T91 L3120MM
L101	32427-904-918	AL02-1R0K
L102	32427-904-919	AL02-1R2K
L104	32427-904-919	AL02-1R2K
L201	32427-904-924	AL02-100K(10UH)
L501	32427-904-930	AL02-101K
L601	32427-904-924	AL02-100K(10UH)
L603	32427-904-924	AL02-100K(10UH)
L604	32427-904-924	AL02-100K(10UH)
L605	32427-904-924	AL02-100K(10UH)
L651	32427-904-924	AL02-100K(10UH)
L652	32427-904-924	AL02-100K(10UH)
L653	32427-904-924	AL02-100K(10UH)
L654	32427-904-924	AL02-100K(10UH)
RL01	32427-904-924	AL02-100K(10UH)
RL02	32427-904-924	AL02-100K(10UH)
RL03	32427-904-924	AL02-100K(10UH)
RL04	32427-904-924	AL02-100K(10UH)
RL05	32427-904-924	AL02-100K(10UH)
RL06	32427-805-550	47UH-K TAPG
	TRANS	
T101	32717-513-800	38.9MHZ(S-60)
	SOCKET-CRT	
**V999	33356-063-680	HF-29.1S ST
	TUNER	
**TU001	34519-600-017	TECC-2989VA15A
	FILTERS	
Z101	34529-440-013	OFWG1956M
**Z201	B1243-0052	TR 5.5M TPS5.5MWATF21
Z202	34527-460-008	TPS6.0MBTF21
Z601	34527-460-030	SFSH5.5MCB-TF21
	CRYSTALS	
RX01	34537-001-003	4.0MHZ
X501	34537-011-010	4.433619MHZ(00262) HC-49

Loc No	Supplier Parts No	Specification
	SWITCHES	
SW02	B3018-0034	EVQ-PB1-05K 7.5X7.1MM G
SW03	B3018-0034	EVQ-PB1-05K 7.5X7.1MM G
SW04	B3018-0034	EVQ-PB1-05K 7.5X7.1MM G
SW05	B3018-0034	EVQ-PB1-05K 7.5X7.1MM G
SW06	B3018-0034	EVQ-PB1-05K 7.5X7.1MM G
SW07	B3018-0034	EVQ-PB1-05K 7.5X7.1MM G
	MISCELLANEOUS	
CN601	33050-101-895	Y4XY4/1185X2/100
CN01	33050-104-100	YJN250-10-50
CN02	33050-104-100	YJN250-10-50
CN03	33050-104-100	YJN250-10-50
CRT1	33054-834-017	P1XP1 DIW1617#22 600MM
GT01	33054-834-017	P1XP1 DIW1617#22 600MM
GT02	33054-834-017	P1XP1 DIW1617#22 600MM
CNC04A	33058-009-020	S5XS5/F/500
CN05A	33058-017-020	S6XS6/F/500
CRTG2	33124-111-100	1P AUTO
CRTGND	33124-111-100	1P AUTO
CTGND1	33124-111-100	1P AUTO
FBTGND	33124-111-100	1P AUTO
GT01	33124-111-100	1P AUTO
GT02	33124-111-100	1P AUTO
JA01	33134-103-050	(HXC-1510-01-300A)X2
HOLD/C	33321-0018-000	ABS V0 GRY CT-6335
CN06	33344-112-660	5267-06
CN901	33344-112-660	5267-06
CNC04	33347-108-180	67094-005 (AUTO)
CN402	33347-114-810	YW025-04(AUTO)
CN601	33347-114-810	YW025-04(AUTO)
123	34503-0021-000	A/P90(G) T0.05 WHT
FBT/C	36633-101-910	ABS V0 GRAY ALL MODEL
PM+HC	37154-101-210	2S-3X10 FE FZY
PP+HC	37154-101-210	2S-3X10 FE FZY
KNOB/M	37624-623-611	ABS HB BLK

ASSY-ACCESSORY

Loc No	Supplier Parts No	Specification
MACH/T	34709-0476-000	A/P120(G) P-70 NORMAL
I/B	34709-0547-000	A/P120(G) 68,5935 GREEK
BATT	34719-035-410	AAM-1.5V(R6)
SVC/N	38134-379-010	ART PAPER 100
PE-BAG	38653-108-191	HDPE T0.015 230X400
W/CARD	A0120-2000	EC(12) 18850X105

ASSY-PWB POWER

*3E50-10033-010 CF6835T P70

Loc No	Supplier Parts No	Specification
PWB	36029-0033-000	T1.6 W330 L197 〈S.N.A〉
	RESISTORS	
PR02	31018-377-822	RD 1/2T 8.2K-J
PR03	31018-377-392	RD 1/2T 3.9K-J
PR04	31018-377-183	RD 1/2T 18K-J
**PR05	A1000-0587	RD 1/2 T(S) 512-J 5.1K
**PR07	A1000-0630	RD 1/2 T(S) 201-J

Loc No	Supplier Parts No	Specification
PR08	31018-377-183	RD 1/2T 18K-J
PR09	31018-377-104	RD 1/2T 100K-J
**PR10	A1000-0643	RD 1/2 T(S) 242-J 2.4K
**PR11	A1000-0587	RD 1/2 T(S) 512-J 5.1K
**PR12	A1000-0630	RD 1/2 T(S) 201-J
PR13	31018-377-152	RD 1/2T 1.5K-J
PR14	31018-377-272	RD 1/2T 2.7K-J
PR15	31018-377-361	RD 1/2P 360-J
**PR16	A1000-0390	RD 1/2 T(S) 222-J 2.2K
PR17	31018-377-622	RD 1/2T 6.2K-J
PR18	31018-377-223	RD 1/2T 22K-J
PR19	31018-377-272	RD 1/2T 2.7K-J
PR20	31018-377-682	RD 1/2T 6.8K-J
**PR21	A1000-0390	RD 1/2 T(S) 222-J 2.2K
**PR22	31046-567-271	RS 2T 270-J(AUTO)
R304	31018-377-102	RD 1/2T 1K-J
R305	31018-377-432	RD 1/2T 4.3K-J
R306	31018-377-432	RD 1/2T 4.3K-J
R308	31018-377-102	RD 1/2T 1K-J
R309	31018-377-331	RD 1/2T 330-J
**R310	31046-467-431	RS 1T 430-J(AUTO)
**R311	31046-567-271	RS 2T 270-J(AUTO)
**R313	31046-567-101	RS 2T 100-J(AUTO)
R314	31018-377-273	RD 1/2T 27K-J
**R315	A1000-0633	RD 1/2 T(S) 112-J 1.1K
**R316	A1000-0642	RD 1/2 T(S) 203-J 20K
**R317	A1000-0652	RD 1/2 T(S) 912-J 9.1K
**R318	A1006-0742	RM 1/2 T(S) 1R3-F 1.3R
**R319	A1006-0742	RM 1/2 T(S) 1R3-F 1.3R
R406	31018-377-221	RD 1/2T 220-J
**R407	A1004-0367	RS 2 T(S) 301-J 300R
**R408	31046-567-680	RS 2T 68-J(AUTO)
R409	31018-377-688	RD 1/2T 0.68-J
R410	31018-377-470	RD 1/2T 47-J
R411	31018-377-391	RD 1/2T 390-J
**R413	31057-002-130	RF 1/2T 0.47-K
**R414	31057-002-130	RF 1/2T 0.47-K
R415	31018-377-152	RD 1/2T 1.5K-J
**R416	31049-375-913	RM 1/2T 91K-F
R417	31018-377-102	RD 1/2T 1K-J
**R418	31049-375-913	RM 1/2T 91K-F
**R419	31059-004-019	RF 2P 1.9-J
**R422	31046-567-220	RS 2T 22-J(AUTO)
R425	31018-377-688	RD 1/2T 0.68-J
**R426	A1010-0031	RF 2 P 100-J 10R
**R801	31028-378-335	RC 1/2T 3.3M-K
R803	31018-377-224	RD 1/2T 220K-J
R804	31018-377-224	RD 1/2T 220K-J
R805	31018-377-223	RD 1/2T 22K-J
**R807	31035-578-108	MPC 71 0.1-K
R808	31018-377-221	RD 1/2T 220-J
**R809	31039-567-200	RW 5H 20-J
**R810	31039-567-200	RW 5H 20-J
R811	31018-377-680	RD 1/2T 68-J
R812	31018-377-221	RD 1/2T 220-J
**R813	A1000-0407	RD 1/2 T(S) 821-J 820R
**R814	31028-428-475	RC 1/2T 4.7M-K/ERC-12AGK

Loc No	Supplier Parts No	Specification
**R815	31028-428-475	RC 1/2T 4.7M-K/ERC-12AGK
**R816	31057-002-130	RF 1/2T 0.47-K
**R819	31046-467-163	RS 1T 16K-J(AUTO)
**R820	31057-002-130	RF 1/2T 0.47-K
R821	31018-377-753	RD 1/2T 75K-J
**R822	A1000-0390	RD 1/2 T(S) 222-J 2.2K
R823	31018-377-102	RD 1/2T 1K-J
R825	31018-377-753	RD 1/2T 75K-J
R826	31018-377-103	RD 1/2T 10K-J
R827	31018-377-102	RD 1/2T 1K-J
R828	31018-377-102	RD 1/2T 1K-J
R829	31018-377-103	RD 1/2T 10K-J
R830	31018-377-102	RD 1/2T 1K-J
R831	31018-377-473	RD 1/2T 47K-J
R832	31018-377-473	RD 1/2T 47K-J
R833	31018-377-472	RD 1/2T 4.7K-J
R834	31018-377-473	RD 1/2T 47K-J
**R835	31057-002-130	RF 1/2T 0.47-K
**R836	A1000-0586	RD 1/2 T(S) 202-J 2K
**R850	A1014-0060	RWC 7 I 5R6-J 5.6R
RR79	31018-377-561	RD 1/2T 560-J
RR80	31018-377-561	RD 1/2T 560-J
RR88	31018-377-223	RD 1/2T 22K-J
RR89	31018-377-220	RD 1/2T 22-J
SR601	31018-177-391	RD 1/8T 390-J
SR602	31018-177-391	RD 1/8T 390-J
**SR603	A1000-0390	RD 1/2 T(S) 222-J 2.2K
SR603	31018-177-222	RD 1/8T 2.2K-J
**SR604	31039-687-109	RW 7H 1-J
SR605	31018-377-399	RD 1/2T 3.9-J
SR606	31018-377-399	RD 1/2T 3.9-J
SR607	31018-177-183	RD 1/8T 18K-J
SR608	31018-177-183	RD 1/8T 18K-J
TR15	31018-377-103	RD 1/2T 10K-J
TR16	31018-377-472	RD 1/2T 4.7K-J
	VARIABLE RESISTORS	
PVR01	31249-128-002	EVN DJA A03 B24
PVR02	31249-128-002	EVN DJA A03 B24
PVR03	31249-128-003	EVN DJA A03 B23
VR301	31249-128-006	EVN DJA A03 B22
VR302	31249-128-004	EVN DJA A03 B13
VR801	31249-128-011	EVN DJA A03 B52
	CAPACITORS	
C304	31507-127-006	ECQ B1 H 103J F3
C305	31507-137-003	ECQ-B 1 152J F3
C306	31507-127-006	ECQ B1 H 103J F3
C307	31607-402-290	CE04W TAPG 50V 100M-M
C308	31607-402-110	CE04W TAPG 35V 220M-M
C309	31417-109-140	CK45 TAPG F 50V 103-Z
**C310	31517-007-004	ECQ-V1 104J F3/2E 100V
C311	31607-402-490	CE04W TAPG 35V 2200M-M
C312	31607-402-210	CE04W TAPG 50V 1M
C313	31607-402-160	CE04W TAPG 50V 0.33UF
C405	31507-137-014	ECQ-B 1 153J F3
**C406	31509-391-050	CQ922M 1600V 0.01M-J

Loc No	Supplier Parts No	Specification
**C407	31509-339-030	CQ922M 800V 0.018-J
**C408	A1102-0274	CF 922 P 400V 274-J -25
C409	31507-137-001	ECQ-B 1 102J F3
C410	31507-127-010	ECQ B1H 473J F3
**C411	31517-390-502	CFS922M TAPG 250V 104-J
C412	31607-401-720	CE04W TAPG 25V 1000M-M
C413	31417-901-400	CK45(T) B2KV 561-K
**C414	31609-402-350	CE04W 50V 2200M-VENT
C415	31417-901-400	CK45(T) B2KV 561-K
C417	31417-901-400	CK45(T) B2KV 561-K
**C418	A1104-0491	CE 04 C 250V T 470-M SG
C419	31607-401-500	CE04W TAPG 16V 470M-M
C420	31507-121-920	CQ921M TAPG 100V 0.1U-M
**C801	31569-204-190	250V 0.47M/KNB 1530
**C802	31569-204-190	250V 0.47M/KNB 1530
**C803	31569-204-190	250V 0.47M/KNB 1530
**C804	A1104-0538	CE 04 C 400V 471-M FL 35
**C806	31469-504-060	ECK-DNS472MEX/E400V 472
**C807	31469-504-060	ECK-DNS472MEX/E400V 472
**C808	31469-504-060	ECK-DNS472MEX/E400V 472
C809	31417-901-400	CK45(T) B2KV 561-K
C810	31607-402-710	CE04W TAPG 35V 1000M-M
C811	31417-901-400	CK45(T) B2KV 561-K
**C812	31609-979-003	CE04W 250V 680M-M(25X50)
C813	31417-901-400	CK45(T) B2KV 561-K
C814	31607-401-770	CE04W TAPG 25V 2200M-M
C815	31417-901-400	CK45(T) B2KV 561-K
C816	31607-401-510	CE04W TAPG 16V 1000U-M
C817	31607-401-720	CE04W TAPG 25V 1000M-M
C820	31607-401-500	CE04W TAPG 16V 470M-M
C821	31607-402-710	CE04W TAPG 35V 1000M-M
C822	31607-401-500	CE04W TAPG 16V 470M-M
C825	31417-767-331	CK45(T) B2KV 331-K
C837	31507-127-012	ECQ B1(V1)H 104J F3(Z3)
C838	31507-127-012	ECQ B1(V1)H 104J F3(Z3)
C840	31507-127-012	ECQ B1(V1)H 104J F3(Z3)
C841	31507-127-012	ECQ B1(V1)H 104J F3(Z3)
**C842	31517-390-502	CFS922M TAPG 250V 104-J
**C843	31517-390-502	CFS922M TAPG 250V 104-J
C850	31607-401-435	CE04W TAPG 16V 10M-M
C854	31607-401-710	CED4W TAPG 25V 470M-M
PC01	31607-402-590	CE04W TAPG 50V 4.7U-M
PC02	31607-402-240	CE04W TAPG 50V 4.7M
PC03	31607-402-290	CE04W TAPG 50V 100M-M
**PC04	31609-803-340	CE04W 25V 6.8U-NF
RC26	31607-401-460	CE04W TAPG 16V 47M
SC601	31607-402-220	CE04W TAPG 50V 2.2M
SC602	31607-402-220	CE04W TAPG 50V 2.2M
SC603	31607-401-670	CE04W TAPG 25V 47M
SC604	31607-401-670	CE04W TAPG 25V 47M
SC605	31607-401-670	CE04W TAPG 25V 47M
SC606	31607-401-670	CE04W TAPG 25V 47M
SC607	31607-403-970	CE04W TAPG 25V 1000M-M
SC608	31507-127-012	ECQ B1(V1)H 104J F3(Z3)
SC609	31607-403-970	CE04W TAPG 25V 1000M-M
SC610	31507-127-012	ECQ B1(V1)H 104J F3(Z3)
SC611	31507-127-012	ECQ B1(V1)H 104J F3(Z3)

Loc No	Supplier Parts No	Specification
SC612	31607-402-710	CE04W TAPG 35V 1000M-M
	I C	
**IC401	A4008-0178	KA7812A TO-220AB
**IC801	A4010-0033	AH1202 SMPS-CONTROL SIP
**IC804	32119-401-210	TL 431
**IC805	A4008-1092	KA7805A TO-220AB 1A
	TRANSISTORS	
PQ01	32137-401-530	KSA 539-Y(TAPG)/YTAM
PQ03	32137-301-720	KSC 815-Y(TAPG)/YTAM
PQ04	32137-301-720	KSC 815-Y(TAPG)/YTAM
PQ05	32137-301-720	KSC 815-Y(TAPG)/YTAM
PQ06	32137-401-530	KSA 539-Y(TAPG)/YTAM
**Q402	32137-301-560	KSC 2331-Y(TAPG)
**Q802	32137-301-720	KSC 815-Y(TAPG)/YTAM
**Q803	A4052-0057	KSA614-Y 25W -3A -80V SI
**Q804	32137-301-720	KSC 815-Y(TAPG)/YTAM
**Q806	A4052-0057	KSA614-Y 25W -3A -80V SI
**Q807	32137-301-720	KSC 815-Y(TAPG)/YTAM
**Q808	32137-301-720	KSC 815-Y(TAPG)/YTAM
RQ10	32137-401-530	KSA 539-Y(TAPG)/YTAM
RQ11	32137-401-530	KSA 539-Y(TAPG)/YTAM
TQ01	32137-301-720	KSC 815-Y(TAPG)/YTAM
	DIODES	
D301	32167-201-070	1N 4003/LTIN 4003
**D401	32167-201-070	1N 4003/LTIN 4003
**D402	32167-201-070	1N 4003/LTIN 4003
**D403	32169-101-210	BY228
**D404	32167-501-030	BYW96D
**D405	32167-208-550	ERC24-06
**D406	32167-208-550	ERC24-06
**D407	32167-208-550	ERC24-06
**D802	32167-441-009	MTZ7.5C
**D803	32167-403-780	MTZ15C
**D804	32167-406-480	1N4148 TAPG
**D805	32167-208-550	ERC24-06
**D806	32169-201-230	RU4AM
**D807	B4106-0126	R2K 170/200V 1.0MA T
**D808	32167-208-550	ERC24-06
**D809	32167-208-550	ERC24-06
**D810	32167-406-130	MTZ 9.1B
PD01	32167-401-780	EQA02-23A TAPG
PD02	32167-406-480	1N4148 TAPG
PD03	32167-406-480	1N4148 TAPG
PD04	32167-406-480	1N4148 TAPG
SD601	32167-406-480	1N4148 TAPG
SD602	32167-406-130	MTZ 9.1B
	VARISTOR	
**P801	A1330-0060	INR10D471K 470V 400MW
	POSISTOR	
**P802	32186-609-430	2C14R(D) ST
	THERMISTER	

Loc No	Supplier Parts No	Specification	
**P803	32189-609-381	NTCS234/4.7	
	MODULE REMOCON		
RP01	32196-411-020	ORC-04VRF(S)	
	PHOTO-COUPLER		
**IC802	32309-024-040	LTV817B	
	LEDS		
LD01	32309-110-230	DS2 (DL-ILR)/SL-5R	
LD02	32309-110-230	DS2 (DL-ILR)/SL-5R	
	COILS		
**L403	32449-730-001	22UH/2PIN	
**L405	32449-412-602	1MH	
**L801	32426-633-160	6MH-SQ1913 ST	
**L802	32426-633-090	39MHX2(U) ST	
**L803	B1160-0020	300UH-K R RS105 PI0.35	
	TRANS-FLY BACK		
**T444	32859-200-013	FCR-25A005R	
	TRANS		
**T401	32846-070-007	7.3MH/105UH ST	
**T801	A1206-0055	P:90-280V S:155/26/14	
	SWITCH		
SW801	33526-401-002	JPW-2104 250V 5/80A	
	CORE-FERRITES		
L402	34047-019-060	3.5X6X1.0	
L406	34047-019-060	3.5X6X1.0	
L804	34047-019-060	3.5X6X1.0	
L805	34047-019-060	3.5X6X1.0	
L806	34047-019-060	3.5X6X1.0	
L807	34047-019-060	3.5X6X1.0	
	FUSE		
**F801	34709-830-060	S505 250V 3.15A 20MM	
	MISCELLANEOUS		
CNP01	33058-103-100	BMW250-10	
CNP02	33058-103-100	BMW250-10	
CNP03	33058-103-100	BMW250-10	
EYELET	33104-107-210	BST 2.8X2.0	
EL01	33104-107-220	BSP 3.2X2.7(2.2)	
EL02	33104-107-220	BSP 3.2X2.7(2.2)	
EL03	33104-107-220	BSP 3.2X2.7(2.2)	
EL04	33104-107-220	BSP 3.2X2.7(2.2)	
EL05	33104-107-220	BSP 3.2X2.7(2.2)	
EL06	33104-107-220	BSP 3.2X2.7(2.2)	
EL07	33104-107-220	BSP 3.2X2.7(2.2)	
EL08	33104-107-220	BSP 3.2X2.7(2.2)	
EL09	33104-107-220	BSP 3.2X2.7(2.2)	
EL10	33104-107-220	BSP 3.2X2.7(2.2)	
EL11	33104-107-220	BSP 3.2X2.7(2.2)	
EL12	33104-107-220	BSP 3.2X2.7(2.2)	
EL13	33104-107-220	BSP 3.2X2.7(2.2)	
EL14	33104-107-220	BSP 3.2X2.7(2.2)	
GT-PIN	33124-111-100	1P AUTO	
F801	33167-001-001	PFC 5000-0202	
CNP04	33347-108-180	67094-005 (AUTO)	
CNP601	33347-114-810	YW025-04(AUTO)	
CNP602	33347-114-810	YW025-04(AUTO)	
LED-G	36033-102-111	ABS HB BLK CX5323W/AMFX	
L-WRNG	38114-103-320	ART PAPER 90(S)	
	ASSY-H/SINK SOUND		
	*3H81-00240-000	31122-0017-010 TA8200AH	
**SIC601	32119-201-190	TA8200AH	
H/SINK	31122-0017-010	A6063 EXTR WHT	⟨S.N.A⟩
SCREW	37158-230-101	2S-3X10 FE FZY	⟨S.N.A⟩
	ASSY-H/SINK VERT		
	*3H82-00540-000	31124-0015-000 RBV606	
**D801	32169-101-100	RBV-606	
H/SINK	31124-0015-000	CUS1-1/2H T0.5	⟨S.N.A⟩
SCREW	37048-130-081	+M3X8 FE FZY	⟨S.N.A⟩
NUT/H	37208-113-001	1-M3 FE FZY	⟨S.N.A⟩
	ASSY-H/SINK H-OUT		
	*3H82-00570-000	31122-0017-030 2SD1887Y	
**Q401	32159-210-032	2SD1887YD	
H/SINK	31122-0017-030	A6063 EXTR WHT	⟨S.N.A⟩
SCREW	37158-230-101	2S-3X10 FE FZY	⟨S.N.A⟩
WASHER	37334-105-910	SPC-1 T1.0 FZY-1	⟨S.N.A⟩
	ASSY-H/SINK VERT		
	*3H82-00580-000	31122-0017-050 TDA3654	
**IC301	32119-110-016	TDA3654	
H/SINK	31122-0017-050	A6063 EXTR WHT	⟨S.N.A⟩
BRKT	36614-241-510	SBHG-1 100 T1.0	⟨S.N.A⟩
SCREW	37158-230-081	2S-3X8FE FZY	⟨S.N.A⟩
	ASSY-H/SINK POWER		
	*3H83-00750-000	31122-0017-060 2SK1217	
**Q801	B4054-0051	2SK1217-F153 100MW 8MA	
H/SINK	31122-0017-060	A6063 EXTR WHT	⟨S.N.A⟩
SCREW	37158-230-101	2S-3X10 FE FZY	⟨S.N.A⟩
WASHER	37334-105-910	SPC-1 T1.0 FZY-1	⟨S.N.A⟩
	ASSY-H/SINK TR		
	*3H84-00210-001	KSC2073 STICK TO 220 AB	
**Q805	A4052-0059	KSC2073 25W 1.5A 4MHZ	
H/SINK	35684-118-390	A6063 EXTR WHT	⟨S.N.A⟩
SCREW	37158-230-061	2S-3X6 FE FZY	⟨S.N.A⟩
	ASSY-H/SINK TR		

Loc No	Supplier Parts No	Specification
	*3H84-00260-000	31122-0018-030 D73Y
**PQ07	A4052-0058	KSD73-Y 30W 5A 20MHZ
H/SINK	31122-0018-030	A6063 EXTR WHT 〈S.N.A〉
SCREW	37158-230-061	2S-3X6 FE FZY 〈S.N.A〉

ASSY–TRANSMITTER

Loc No	Supplier Parts No	Specification
	*3F14-00038-091	TM38,SIM135-1,31,E,S/S

ASSY–SPEAKER

Loc No	Supplier Parts No	Specification
	*3H73-20540-000	06L91BRAX2 L700 R900 RG
LEAD/C	33058-111-101	Y4/F22/700,900
**SPK	34209-200-007	06L91BRA 5W 8R

ASSY–POWER CORD

Loc No	Supplier Parts No	Specification
	*3H64-00010-450	H/C450MM BLK-HOU NOR
PWR/C	33053-816-510	KKD-419C KLCE-2F,F,BLK
HOLD/C	33323-0001-000	PP V0 BLK

CX6835Z/UKGSX(OPTION)

BUYER ;ERGO STARS('94.09.05)

ASSY-PWB MAIN

*3T30-02492-040 CX6835Z/UKGSX

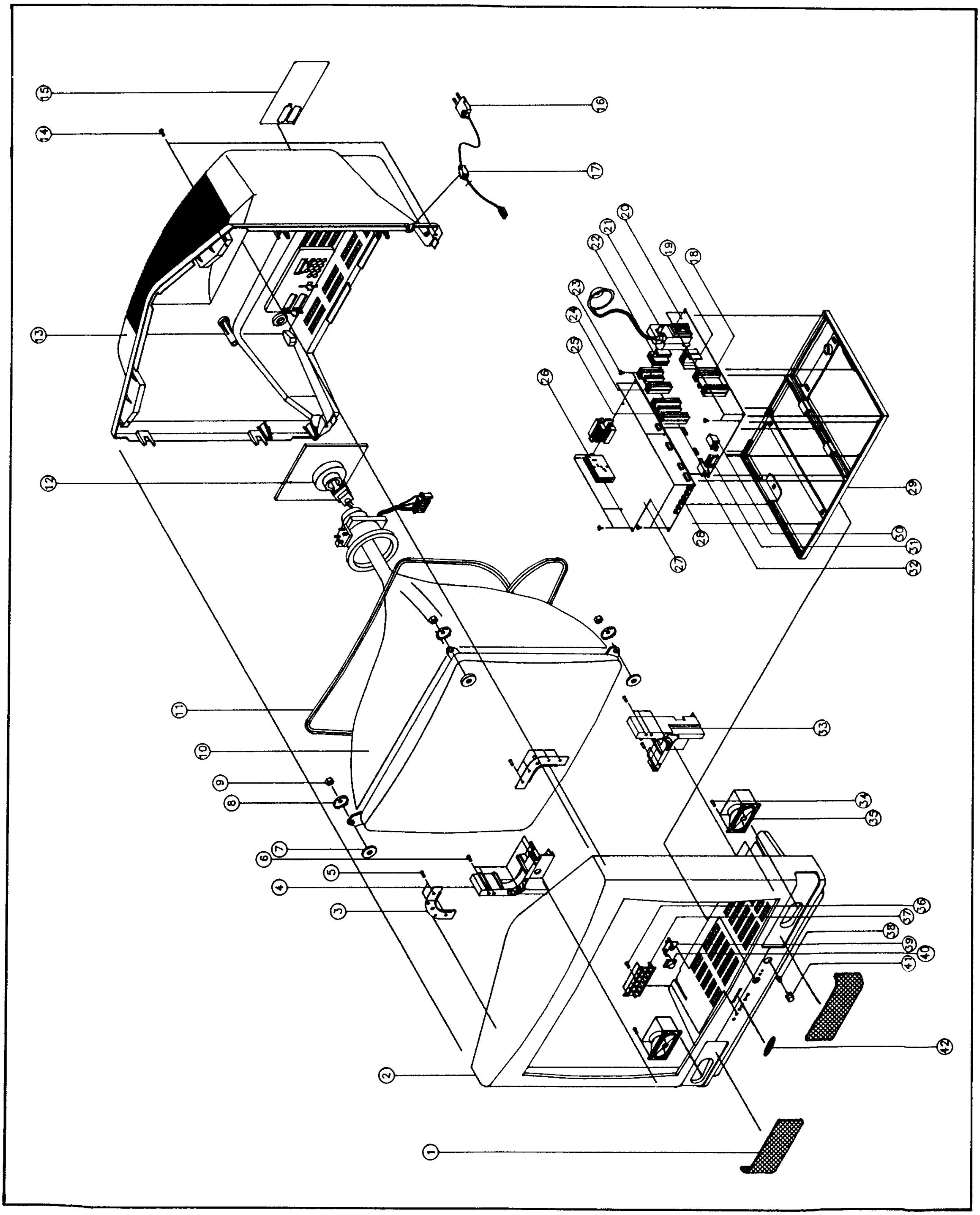
ASSY-ACCESSORY

Loc No	Supplier Parts No	Specification
I/B(E)	34709-0476-000	A/P120(G) P-70 NORMAL
I/B(G)	34709-0547-000	A/P120(G) 68,5935 GREEK
PE-BAG	38653-108-191	HDPE T0.015 230X400

Loc No	Supplier Parts No	Specification

MEMO

4. Exploded view



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CX6835T

The items with "*" are usually out of stock since they are seldom required for the routine service. There may be some anticipated delay when you order these items.
***** S.N.A = SERVICE NOT AVAILABLE. *****

No.	Code No.	Description	Specification	Remarks	Q'TY
1	34003-0052-000	GRILLE-WOOFER	SECC T0.5 3R #066		2
2	*3G90-68351-010	ASSY-CABINET,FRONT	HIPS HB BLK #066		1
	32001-0046-000	CABINET-FRONT	HIPS HB BLK #066		1
3	36613-165-811	BRACKET-CRT	SBHG 100 T1.5		2
4	33321-0055-000	HOLDER-CRT,BOT(R)	ABS V0 GRAY		1
5	37148-540-201	SCREW-TAP,RH	2S-4X20 FE FZY		8
6	37148-540-201	SCREW-TAP,RH	2S-4X20 FE FZY		8
7	37333-101-130	WASHER-GUM,CRT	NATURAL RUBBER HB GRAY		4
8	DELETE ITEM	WASHER-SPRING			
9	A0106-0037	NUT-CAP	IC SM20C M8 ZPC3 YEL		4
10	LOCAL-PURCHASE	ASSY-CRT	A66EAK71X01		
					1
11	A1149-0006	COIL-DEGAUSSING	29" 250OHM T91 L3120MM	**AMFO**	1
12	33356-063-680	SOCKET-CRT	HF-29.1S ST	**NSI, SEG, SECOSA,SESAB**	1
13	32001-0047-010	CABINET-BACK	HIPS V0 BLK		1
	32001-0047-000	CABINET-BACK	HIPS V0 BLK		9
14	30509-0004-000	SCREW-TAPPING	RH+2S4L20		1
15	34012-0061-010	INLAY-BACK	PVC SHEET T0.3 BLK		1
16	33053-816-510	POWER-CORD,ASSY	KKD-419C,KLCE-2F,F		1
17	33323-0001-000	HOLDER-CORD	PP V0 BLK		1
18	*3H83-00750-000	ASSY-H/S,POWER(Q801)	2SK1217-F153		1
19	*3H84-00260-000	ASSY-H/S,EW,TR(PQ07)	KSD73-Y 30W 5A		1
20	*3E50-10033-010	ASSY-PWB,POWER	CF6835T P70		1
	36029-0033-000	PCB-POWER	330X197X1.6T P70		S.N.A
21	32859-200-013	TRANS-FLYBACK	FCR-25A005R		1
22	*3H82-00570-000	ASSY-H/S,H-OUT(Q401)	2SD1887YD		1
23	37154-101-210	SCREW-WASHER,SPEC	2S-3X10 FE FZY		15
24	*3H81-00240-000	ASSY-H/S,SOUND(SIC601)	TA8200AH		1
25	*3H82-00580-000	ASSY-H/S,VERT(IC301)	TDA3654		1
26	34519-600-017	TUNER	TECC-2989VA15A		1
27	*3T30-02490-030	ASSY-PWB,MAIN	CX6835T/UKASX		1
	36029-0032-000	PCB-MAIN	T1.6 W330 L245 P70		S.N.A
28	B3018-0034	SW-TACT,V	EVQ-PBI-05K		6
29	33321-0018-000	HOLDER-CHASSIS	ABS V0 GRAY		1
30	33526-401-002	SWITCH-PUSH,PWR	JPW-2104 250V 5/80A		1
31	32309-110-230	LED	DS2(DL-ILR)/SL-5R		2
32	32196-411-020	MODULE-REMOCON	ORC-04VRF(S)		1
33	33321-0055-010	HOLDER-CRT,BOT(L)	ABS V0 GRAY		1
34	37128-540-122	SCREW-TAP,TH(SPK+CF)	2S-4X12 FE FZW		8
35	34209-200-007	SPEAKER-GENERAL	06L91BRA 5W 8R		2
36	37148-530-123	SCREW-TAP,RH(KNO+CF)	2S-3X2 FE FZB		3
37	34083-0037-000	KNOB-CONTROL	ABS V0 BLK #066		1
38	36673-102-010	SPRING-COIL	SUS 0.5		1
39	34163-0006-000	INDICATOR-LED	ACRYL CLEAR CT-6835		1
40	34073-0016-000	WINDOW-REMOCON	PC CT-6835		1
41	34083-0113-000	KNOB-POWER	ABS V0 BLK #066		1
42	34533-0052-010	BADGE-BRAND	AL FORGING T1.7		1

CX6835Z

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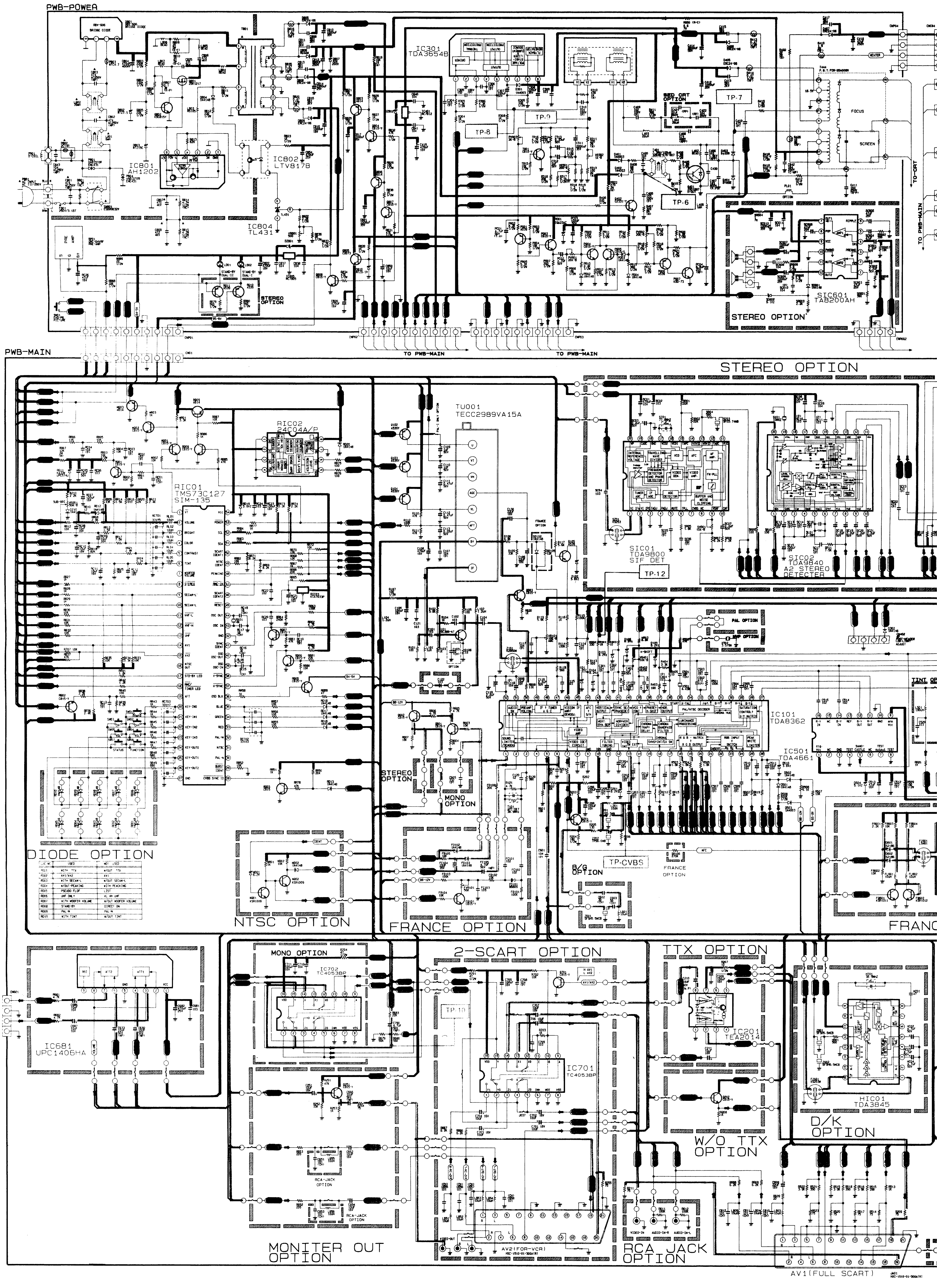
***** S.N.A = SERVICE NOT AVAILABLE. *****

No.	Code No.	Description	Specification	Remarks	Q'TY
1	34003-0052-000	GRILLE-WOOFER	SECC T0.5 3R #066		2
2	*3G90-68351-010	ASSY-CABINET,FRONT	HIPS HB BLK #066		1
	32001-0046-000	CABINET-FRONT	HIPS HB BLK #066		1
3	36613-165-811	BRACKET-CRT	SBHG 100 T1.5		2
4	33321-0055-000	HOLDER-CRT,BOT(R)	ABS V0 GRAY		1
5	37148-540-201	SCREW-TAP,RH(HC+CF)	2S-4X20 FE FZY		8
6	37148-540-201	SCREW-TAP,RH(HC+CF)	2S-4X20 FE FZY		8
7	37333-101-130	WASHER-GUM,CRT	NATURAL RUBBER HB GRAY		4
8	DELETE ITEM	WASHER-SPRING			
9	A0106-0037	NUT-CAP	IC SM20C M8 ZPC3 YEL		4
10	LOCAL-PURCHASE	ASSY-CRT	A66EAK71X01		
11	A1149-0006	COIL-DEGAUSSING	29" 25OHM T91 L3120MM		1
12	33356-063-680	SOCKET-CRT	HF-29.1S ST		1
13	32001-0047-010	CABINET-BACK	HIPS V0 BLK		9
14	30509-0004-000	SCREW-TAPPING	RH+2S4L20		1
15	34012-0061-010	INLAY-BACK	PVC SHEET T0.3 BLK		1
16	33053-816-510	POWER-CORD,ASSY	KKD-419C,KLCE-2F,F		1
17	33323-0001-000	HOLDER-CORD	PP V0 BLK		1
18	*3H83-00750-000	ASSY-H/S,POWER(Q801)	2SK1217-F153		1
19	*3H84-00260-000	ASSY-H/S,EW,TR(PQ07)	KSD73-Y 30W 5A		1
20	*3E50-10033-010	ASSY-PWB,POWER	CF6835T P70		1
	36029-0033-000	PCB-POWER	330X197X1.6T P70		S.N.A
21	32859-200-013	TRANS-FLYBACK	FCR-25A005R		1
22	*3H82-00570-000	ASSY-H/S,H-OUT(Q401)	2SD1887YD		1
23	37154-101-210	SCREW-WASHER,SPEC	2S-3X10 FE FZY		15
24	*3H81-00240-000	ASSY-H/S,SOUND(SIC601)	TA8200AH		1
25	*3H82-00580-000	ASSY-H/S,VERT(IC301)	TDA3654		1
26	34519-600-017	TUNER	TECC-2989VA15A		1
27	*3T30-02492-010	ASSY-PWB,MAIN	CX6835Z/UKPSX		1
	36029-0032-000	PCB-MAIN	T1.6 W330 L245 P70		S.N.A
28	B3018-0034	SW-TACT,V	EVQ-PBI-05K		6
29	33321-0018-000	HOLDER-CHASSIS	ABS V0 GRAY		1
30	33526-401-002	SWITCH-PUSH,PWR	JPW-2104 250V 5/80A		1
31	32309-110-230	LED	DS2(DL-ILR)/SL-5R		2
32	32196-411-020	MODULE-REMOCON	ORC-04VRF(S)		1
33	33321-0055-010	HOLDER-CRT,BOT(L)	ABS V0 GRAY		1
34	37128-540-122	SCREW-TAP,TH(SPK+CF)	2S-4X12 FE FZW		8
35	34209-200-007	SPEAKER-GENERAL	06L91BRA 5W 8R		2
36	37148-530-123	SCREW-TAP,RH(KNO+CF)	2S-3X12 FE FZB		3
37	34083-0037-000	KNOB-CONTROL	ABS V0 BLK #066		1
38	36673-102-010	SPRING-COIL	SUS 0.5		1
39	34163-0006-000	INDICATOR-LED	ACRYL CLEAR CT-6835		1
40	34073-0016-000	WINDOW-REMOCON	PC CT-6835		1
41	34083-0113-000	KNOB-POWER	ABS V0 BLK #066		1
42	34533-0052-010	BADGE-BRAND	AL FORGING T1.7		1

SCHEMATIC DIAGRAM

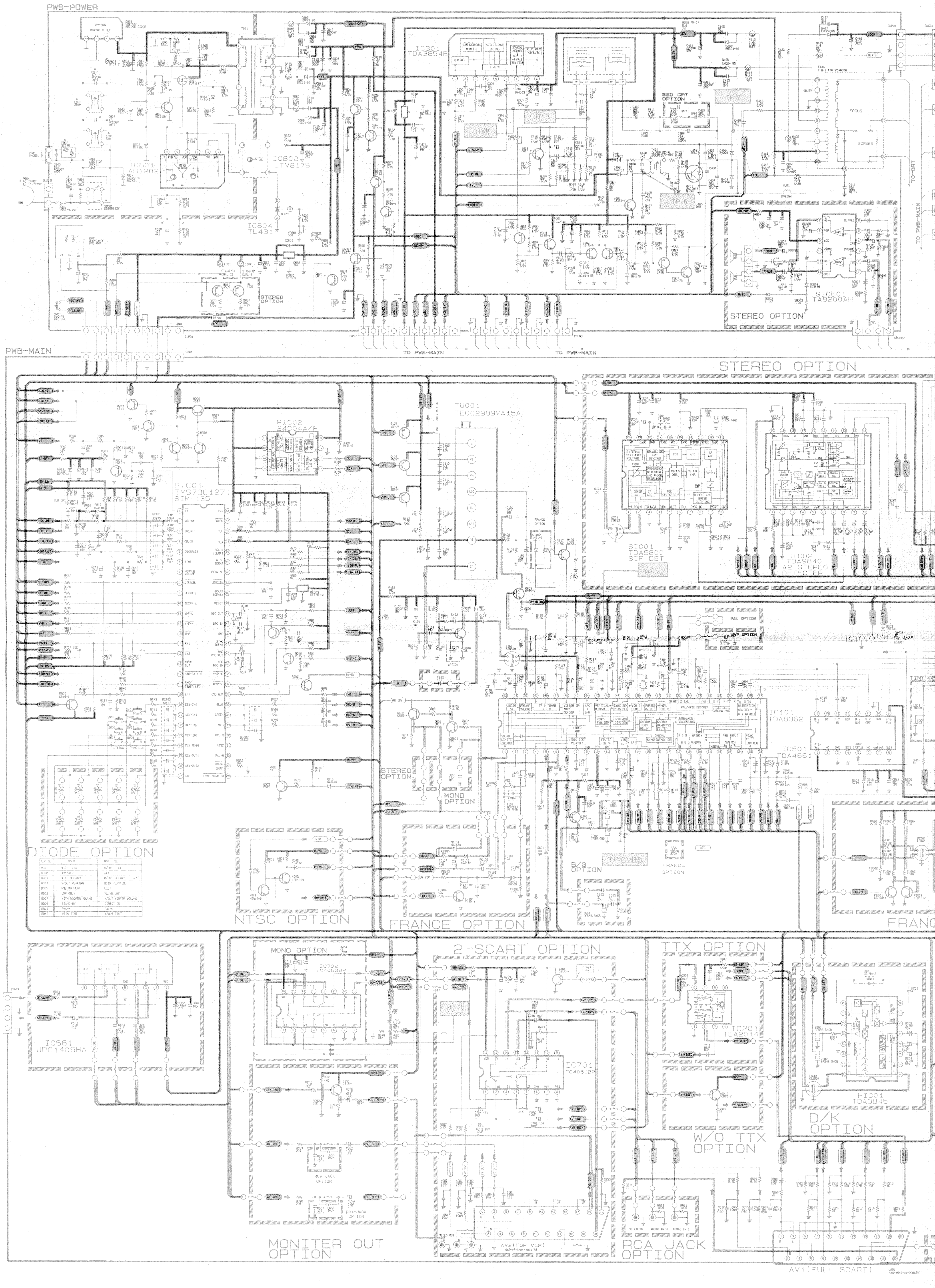
CHASSIS: P70
MODEL: 6835, 5935
SYSTEM: PAL, SECAM-B/G, D/K, PAL-I
NT4.43, NT3.58 (VIT), SECAM-L′/L

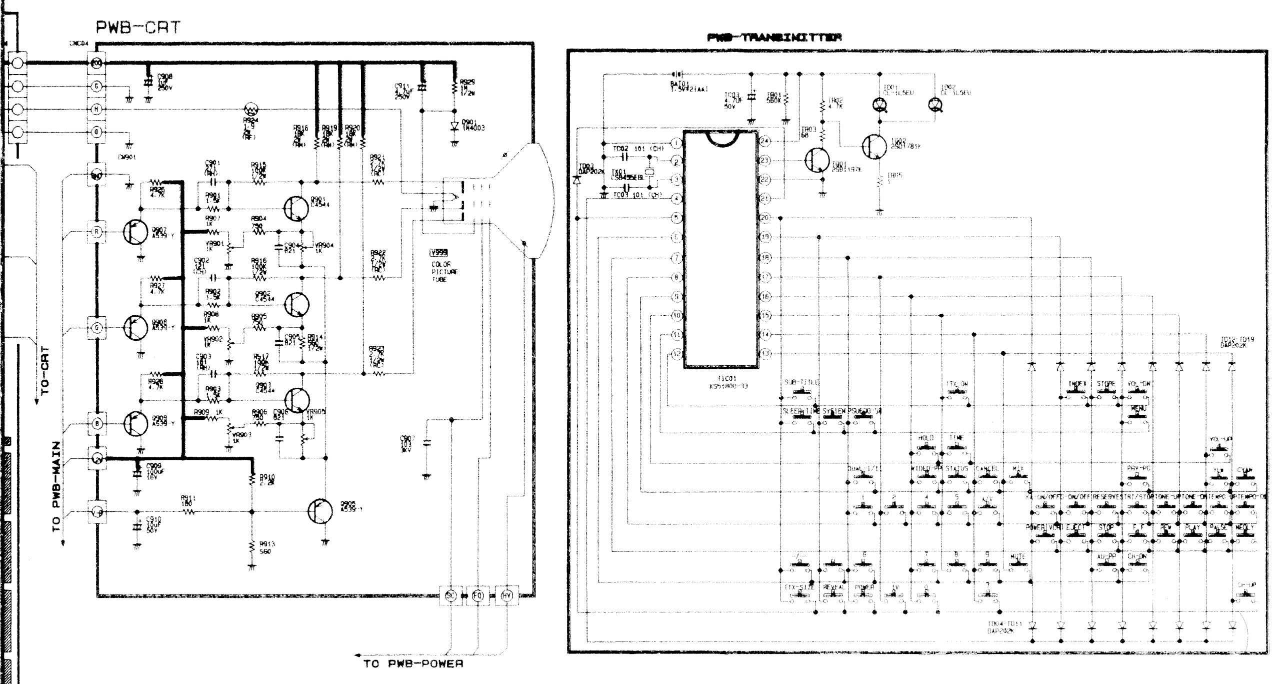

PWB-POWER
IC801
AH1202
IC802
LTV817B
IC804
TL431
IC301
TDA3654B
TP-7
TP-8
TP-9
TP-6
FOCUS
SCREEN
TO-CRT
TO PWB-MAIN
SIC601
TA8200AH
STEREO OPTION
TO PWB-MAIN
TO PWB-MAIN
PWB-MAIN
STEREO OPTION
TU001
TECC2989VA15A
RIC02
24C04A/P
RIC01
TMS73C127
SIM-135
SIC01
TDA9800
SIF DET
SIC02
TDA9840
A2 STEREO
DETECTER
TP-12
PAL OPTION
IC101
TDA8362
IC501
TDA4661
STEREO OPTION
MONO OPTION
DIODE OPTION
NTSC OPTION
FRANCE OPTION
TP-CVBS
B/G OPTION
FRANCE OPTION
IC681
UPC1406HA
MONO OPTION
IC702
TC4053BP
2-SCART OPTION
TP-10
IC701
TC4053BP
TTX OPTION
IC201
TEA2014
HIC01
TDA3845
D/K OPTION
W/O TTX OPTION
RCA-JACK OPTION
RCA-JACK OPTION
MONITER OUT OPTION
AV2 (FOR-VCR)
RCA JACK OPTION
AV1 (FULL SCART)

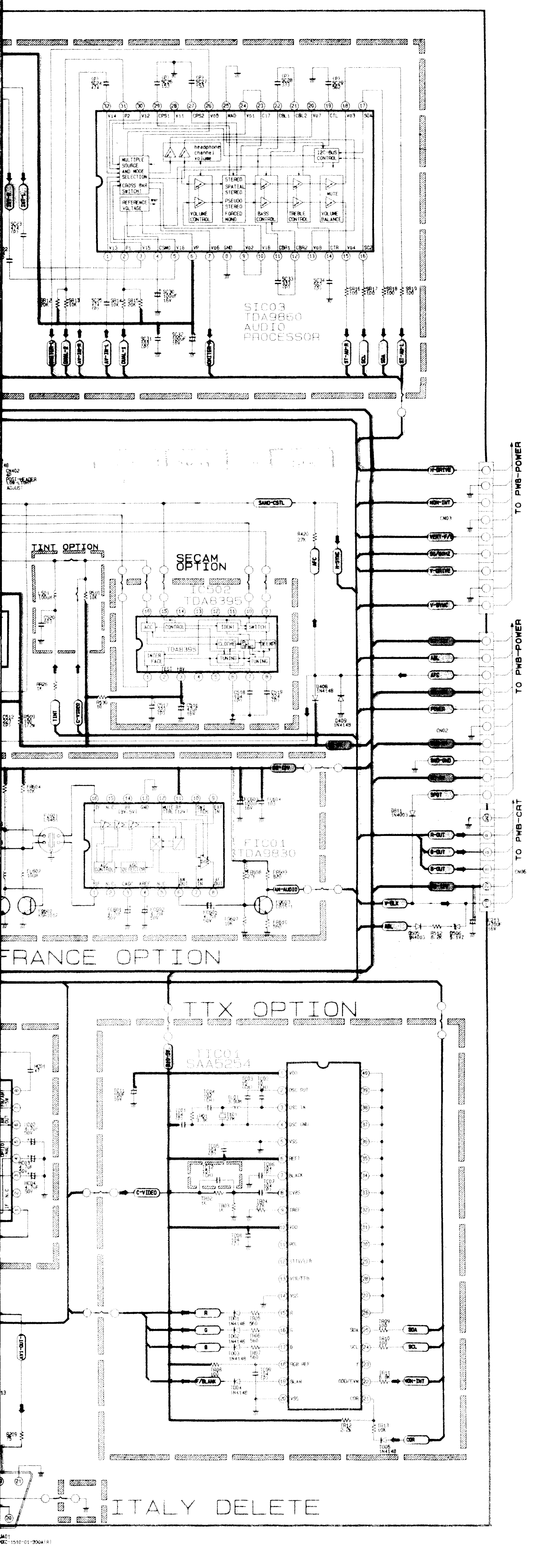
LOC NO	USED	NOT USED
RD01	WITH TTX	W/OUT TTX
RD02	AV1/AV2	AV1
RD03	WITH SECAM-L	W/OUT SECAM-L
RD04	W/OUT-PEAKING	WITH PEACKING
RD05	PSEUDO FLOF	LIST
RD06	UHF ONLY	VL.VH UHF
RD07	WITH WOOFER VOLUME	W/OUT WOOFER VOLUME
RD08	STAND-BY	DIRECT ON
RD09	PAL-M	PAL-N
RD10	WITH TINT	W/OUT TINT

SCHEMATIC DIAGRAM

CHASSIS: P70
MODEL: 6835, 5935
SYSTEM: PAL, SECAM-B/G, D/K, PAL-I
NT4.43, NT3.58(VIT), SECAM-L′/L


PWB-POWER
IC801 AH1202
IC802 LTV817B
IC804 TL431
IC301 TDA3654B
TP-8
TP-9
TP-7
TP-6
SED CRT OPTION
FOCUS
SCREEN
TO CRT
TO PWB-MAIN
SIC601 TAB200AH
STEREO OPTION
TO PWB-MAIN
PWB-MAIN
STEREO OPTION
TU001 TECC2989VA15A
RIC02 24C04A/P
RIC01 TMS73C127 SIM-135
SIC01 TDA9800 SIF DET
TP-12
SIC02 TDA9840 A2 STEREO DETECTER
PAL OPTION
NVP OPTION
IC101 TDA8362
IC501 TDA4661
DIODE OPTION
NTSC OPTION
STEREO OPTION
MONO OPTION
B/G OPTION
TP-CVBS
FRANCE OPTION
FRANCE OPTION
FRANC
MONO OPTION
IC702 TC4053BP
2-SCART OPTION
TTX OPTION
IC681 UPC1406HA
TP-10
IC701 TC4053BP
IC201 TEA2014
HIC01 TDA3845
D/K OPTION
W/O TTX OPTION
RCA-JACK OPTION
MONITER OUT OPTION
AV2(FOR-VCR)
RCA JACK OPTION
AV1(FULL SCART)





LOC.	25INCH	28INCH
PR20	1/2W 3.3K	1/2W 6.8K
PR19	1/2W 3.3K	1/2W 2.7K

EXPRESSION

1 Resistance is shown ohm K=1.000 M=1.000.000

2 Unless otherwise noted in schematic all capacitor values less than 1 are expressed in ufd. the values more than 1 in pF.

3 Unless otherwise noted in schematic all inductor values are expressed in uH and the values less than 1 in mH.

NOTE

The circuits are subject to change without notice to improve the picture quality.

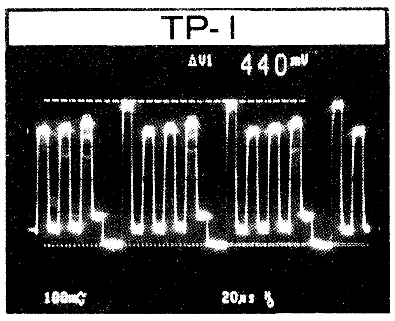
R E S I S T O R	
Carbon	No Mark
Composition	(RC)
Metal Oxide	(RS)
Metal Film	(RN)
Fusible	(RF)
Cement. Wire	(RW)
Network	(RN)

C A P A C I T O R	
Ceramic - SL	No Mark
Ceramic - RH	(RH)
Ceramic - CH	(CH)
Polyester(Induct)	(P)
Polyester(Noninduct)	(PMU)
Polypropylene	(PP)
Metal Polyester	(MP)
M.P.Polypropylene	(MPP)
Tantalium	(T)
Non Polar	(NP)

DIFFERNT PARTS FOR SYSTEM

LOC NO	PAL-B/G	PAL/SECAM -B.G	PAL/SECAM -B.G.D.K	PAL-I	SECAM-L/L'
IC502	DELETE	TDA8395	TDA8395	DELETE	TDA8395
C517	DELETE	POLY 223	POLY 223	DELETE	POLY 223
C516	DELETE	16V 47uF	16V 47uF	DELETE	16V 47uF
C518	DELETE	POLY 104	POLY 104	DELETE	POLY 104
C519	DELETE	POLY 224	POLY 224	DELETE	POLY 224
R530	DELETE	10	10	DELETE	10
FIC01	DELETE	DELETE	TDA3845	DELETE	TDA9830
L601	10UH	10UH	DELETE	10UH	10UH
Z101	OFWG1956	OFWG1956	G3963M	K2950M	K2950M
Z201	TPS5.5MW	TPS5.5MW	TPS5.5MW	DELETE	TPS5.5MW
Z202	TPS6.0MB	TPS6.0MB	TPS6.5MB	TPS6.0MB	TPS6.0MB
Z601	SFSH5.5MCB	SFSH5.5MCB	SFSH5.5MCB	DELETE	SFSH5.5MCB
Z602	DELETE	DELETE	SFSH6.5MCB	SFE6.0MB	DELETE
FR101	DELETE	DELETE	DELETE	DELETE	100K
FR604	DELETE	DELETE	DELETE	DELETE	10K
FD602	DELETE	DELETE	DELETE	DELETE	1S2186
FD601	DELETE	DELETE	DELETE	DELETE	1S2186
FR603	DELETE	DELETE	DELETE	DELETE	10K
FZ601	DELETE	DELETE	K9253M	DELETE	L9461
FR602	DELETE	DELETE	DELETE	DELETE	10K
C122	DELETE	DELETE	103	DELETE	103
FL602	DELETE	DELETE	DELETE	DELETE	10UH
FL601	DELETE	DELETE	DELETE	DELETE	10UH
FQ602	DELETE	DELETE	DELETE	DELETE	KSR1012
FQ601	DELETE	DELETE	DELETE	DELETE	KSR1011
FC602	DELETE	DELETE	DELETE	DELETE	4.7UF 50V
FC601	DELETE	DELETE	DELETE	DELETE	50V 4.7UF
FC603	DELETE	DELETE	DELETE	DELETE	16V 100UF
FQ101	DELETE	DELETE	DELETE	DELETE	C815-Y
FR104	DELETE	DELETE	DELETE	DELETE	10K
FVR101	DELETE	DELETE	DELETE	DELETE	50K-B
FR103	DELETE	DELETE	DELETE	DELETE	100K
FC103	DELETE	DELETE	DELETE	DELETE	103
FC105	DELETE	DELETE	DELETE	DELETE	50V 4.7UF
FR102	DELETE	DELETE	DELETE	DELETE	33K
FC101	DELETE	DELETE	DELETE	DELETE	102
FD101	DELETE	DELETE	DELETE	DELETE	BB809
FC102	DELETE	DELETE	DELETE	DELETE	102
FQ603	DELETE	DELETE	DELETE	DELETE	C815-Y
FR608	DELETE	DELETE	DELETE	DELETE	27K
FR607	DELETE	DELETE	DELETE	DELETE	10K
FR609	DELETE	DELETE	DELETE	DELETE	820
FR610	DELETE	DELETE	DELETE	DELETE	56K
FC104	DELETE	DELETE	DELETE	DELETE	35V 22UF
FR105	DELETE	DELETE	DELETE	DELETE	10K
FD103	DELETE	DELETE	DELETE	DELETE	1N4148
FD102	DELETE	DELETE	DELETE	DELETE	1N4148
RR29	DELETE	DELETE	DELETE	DELETE	1K
RR33	DELETE	DELETE	DELETE	DELETE	10K
RR34	DELETE	DELETE	DELETE	DELETE	3.3K

TP-1



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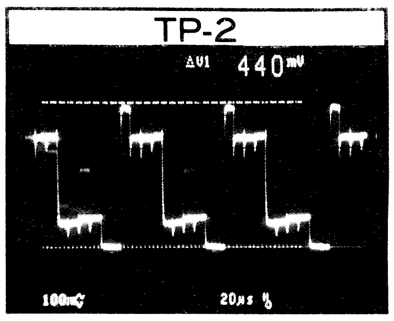

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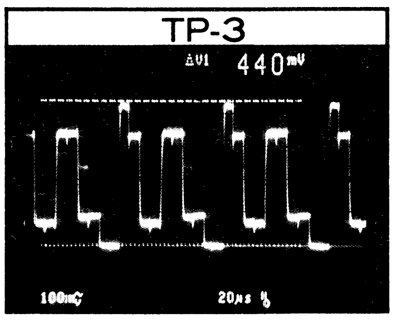
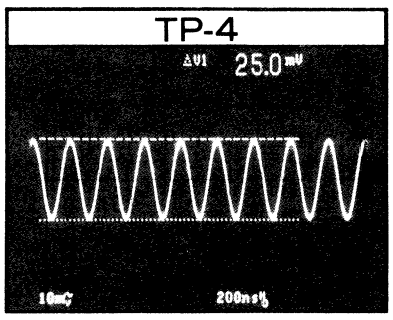
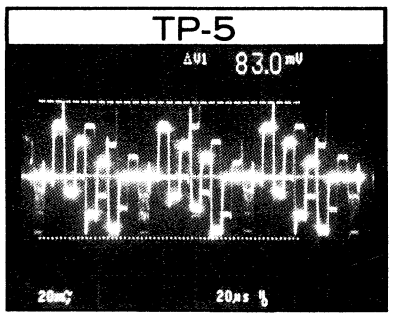


TP-4



TP-5



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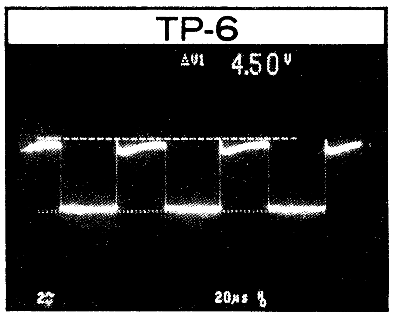

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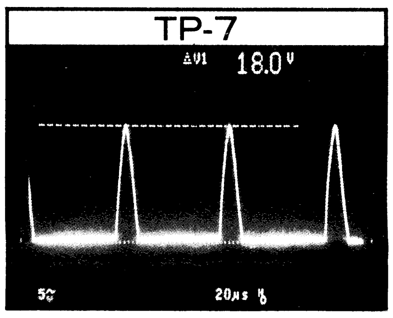

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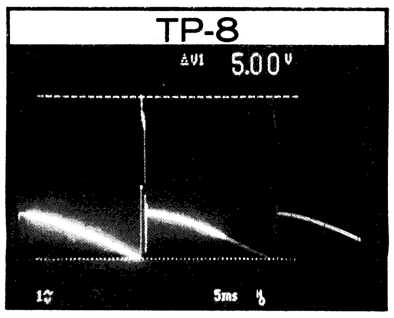

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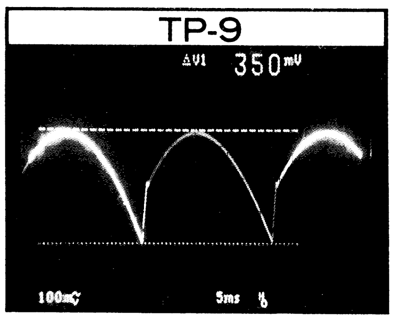

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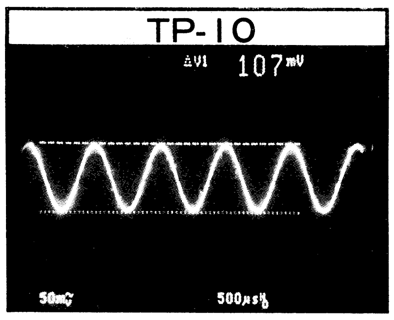
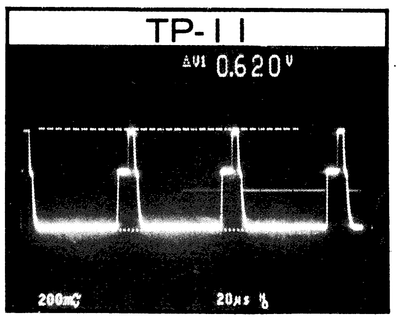
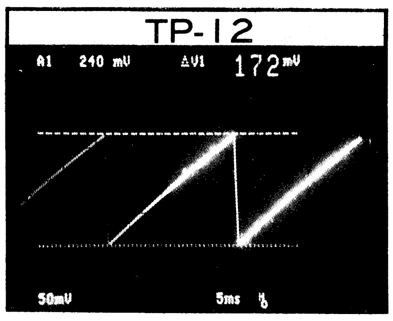


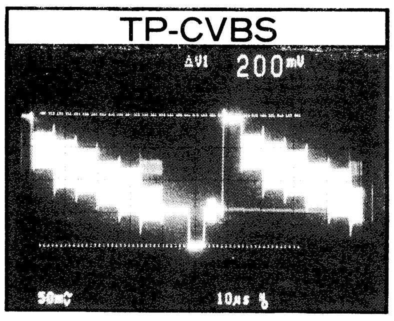
TP-11

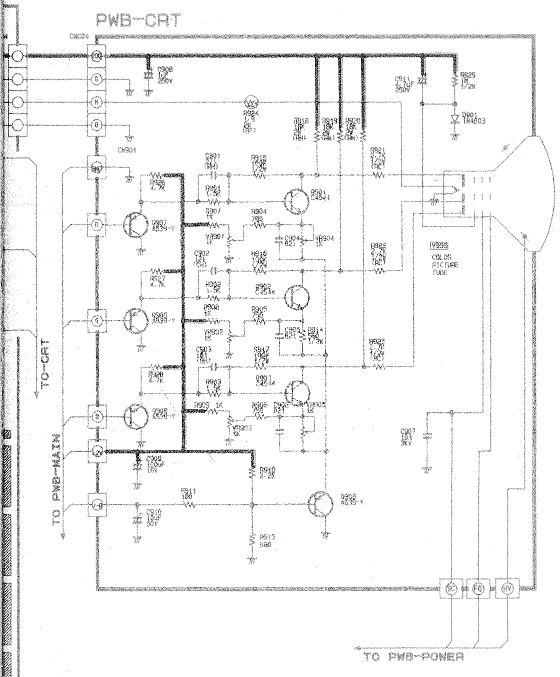


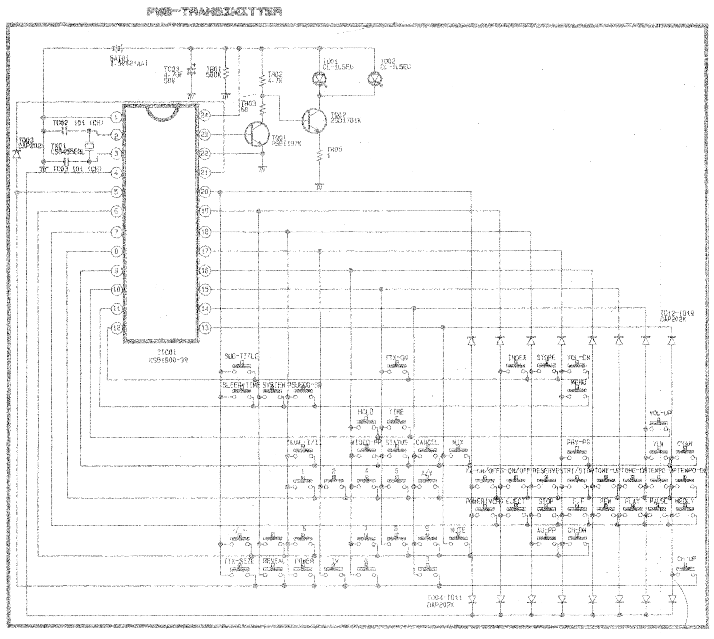
TP-12

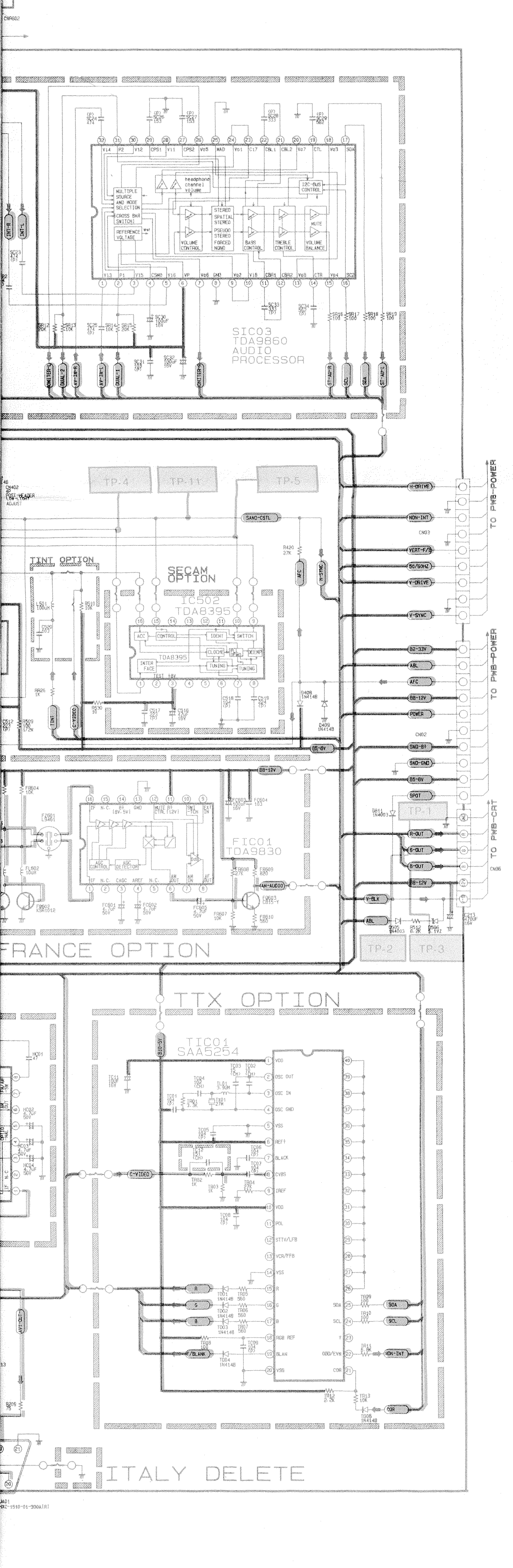


TP-CVBS




PWB-CRT
TO PWB-MAIN
TO-CRT
COLOR PICTURE TUBE
TO PWB-POWER


PWB-TRANSMITTER
TIC01
SUB-TITLE
INDEX
STORE
VOL-DN
HOLD
TIME
VOL-UP
TTX-SIZE
REVEAL
POWER
TV
MUTE
AU-PP
CH-DN
CH-UP
TD04-TD11
DAP202K


SIC03
TDA9860
AUDIO
PROCESSOR
TP-4
TP-11
TP-5
TINT OPTION
SECAM
OPTION
IC502
TDA8395
TO PWB-POWER
TO PWB-POWER
TO PWB-CRT
FIC01
TDA9830
TP-1
FRANCE OPTION
TP-2
TP-3
TTX OPTION
TIC01
SAA5254
ITALY DELETE

LOC.	25INCH	28INCH
PR20	1/2W 3.3K	1/2W 6.8K
PR19	1/2W 3.3K	1/2W 2.7K

EXPRESSION

1 Resistance is shown ohm K=1.000 M=1.000.000

2 Unless otherwise noted in schematic all capacitor values less than 1 are expressed in ufd. the values more than 1 in pF.

3 Unless otherwise noted in schematic all inductor values areexpressed in uH.and the values less than 1 in mH.

NOTE

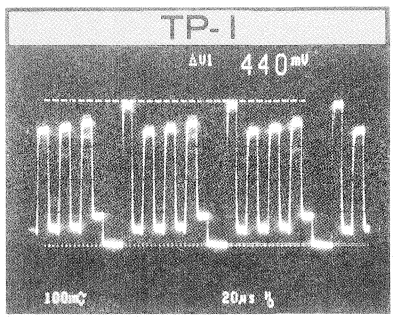
The circuits are subject to change without notice to improve the picture quality.

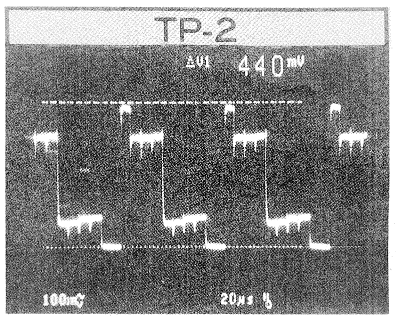
RESISTOR	
Carbon	No Mark
Composition	(RC)
Metal Oxide	(RS)
Metal Film	(RN)
Fusible	(RF)
Cement,Wire	(RW)
Network	(RN)

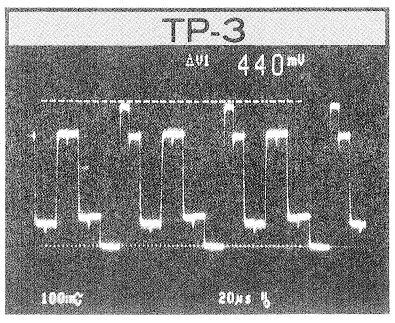
CAPACITOR	
Ceramic - SL	No Mark
Ceramic - RH	(RH)
Ceramic - CH	(CH)
Polyester(Induct)	(P)
Polyester(Noninduct)	(PNU)
Polypropylene	(PP)
Metal Polyester	(MP)
M.P.Polypropylene	(MPP)
Tantalium	(T)
Non Polar	(NP)

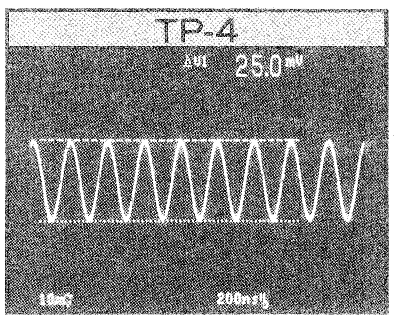
DIFFERNT PARTS FOR SYSTEM

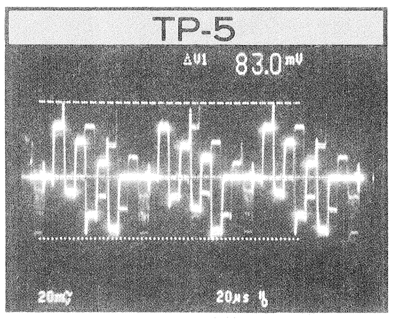
LOC NO	PAL-B/G	PAL/SECAM -B.G	PAL/SECAM -B.G.D.K	PAL-I	SECAM-L/L'
IC502	DELETE	TDA8395	TDA8395	DELETE	TDA8395
C517	DELETE	POLY 223	POLY 223	DELETE	POLY 223
C516	DELETE	16V 47uF	16V 47uF	DELETE	16V 47uF
C518	DELETE	POLY 104	POLY 104	DELETE	POLY 104
C519	DELETE	POLY 224	POLY 224	DELETE	POLY 224
R530	DELETE	10	10	DELETE	10
FIC01	DELETE	DELETE	TDA3845	DELETE	TDA9830
L601	10UH	10UH	DELETE	10UH	10UH
Z101	OFWG1956	OFWG1956	83963M	K2950M	K2950M
Z201	TPS5.5MW	TPS5.5MW	TPS5.5MW	DELETE	TPS5.5MW
Z202	TPS6.0MB	TPS6.0MB	TPS6.5MB	TPS6.0MB	TPS6.0MB
Z601	SFSH5.5MCB	SFSH5.5MCB	SFSH5.5MCB	DELETE	SFSH5.5MCB
Z602	DELETE	DELETE	SFSH5.5MCB	SFE6.0MB	DELETE
FR101	DELETE	DELETE	DELETE	DELETE	100K
FR604	DELETE	DELETE	DELETE	DELETE	10K
FD602	DELETE	DELETE	DELETE	DELETE	1S2186
FD601	DELETE	DELETE	DELETE	DELETE	1S2186
FR603	DELETE	DELETE	DELETE	DELETE	10K
FZ601	DELETE	DELETE	K9253M	DELETE	L9461
FR602	DELETE	DELETE	DELETE	DELETE	10K
C122	DELETE	DELETE	103	DELETE	103
FL602	DELETE	DELETE	DELETE	DELETE	10UH
FL601	DELETE	DELETE	DELETE	DELETE	10UH
FQ602	DELETE	DELETE	DELETE	DELETE	KSR1012
FQ601	DELETE	DELETE	DELETE	DELETE	KSR1011
FC602	DELETE	DELETE	DELETE	DELETE	4.7UF 50V
FC601	DELETE	DELETE	DELETE	DELETE	50V 4.7UF
FC603	DELETE	DELETE	DELETE	DELETE	16V 100UF
FQ101	DELETE	DELETE	DELETE	DELETE	C815-Y
FR104	DELETE	DELETE	DELETE	DELETE	10K
FVR101	DELETE	DELETE	DELETE	DELETE	50K-B
FR103	DELETE	DELETE	DELETE	DELETE	100K
FC103	DELETE	DELETE	DELETE	DELETE	103
FC105	DELETE	DELETE	DELETE	DELETE	50V 4.7UF
FR102	DELETE	DELETE	DELETE	DELETE	33K
FC101	DELETE	DELETE	DELETE	DELETE	102
FD101	DELETE	DELETE	DELETE	DELETE	BB809
FC102	DELETE	DELETE	DELETE	DELETE	102
FQ603	DELETE	DELETE	DELETE	DELETE	C815-Y
FR608	DELETE	DELETE	DELETE	DELETE	27K
FR607	DELETE	DELETE	DELETE	DELETE	10K
FR609	DELETE	DELETE	DELETE	DELETE	82K
FR610	DELETE	DELETE	DELETE	DELETE	56K
FC104	DELETE	DELETE	DELETE	DELETE	35V 22UF
FR105	DELETE	DELETE	DELETE	DELETE	10K
FD103	DELETE	DELETE	DELETE	DELETE	1N4148
FD102	DELETE	DELETE	DELETE	DELETE	1N4148
RR29	DELETE	DELETE	DELETE	DELETE	1K
RR33	DELETE	DELETE	DELETE	DELETE	10K
RR34	DELETE	DELETE	DELETE	DELETE	3.3K

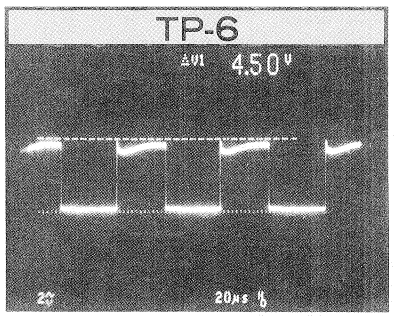


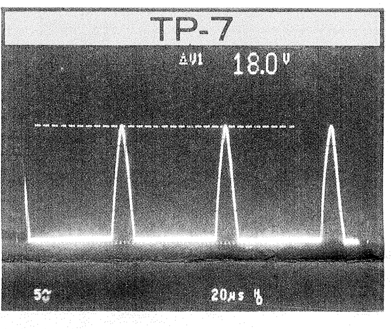


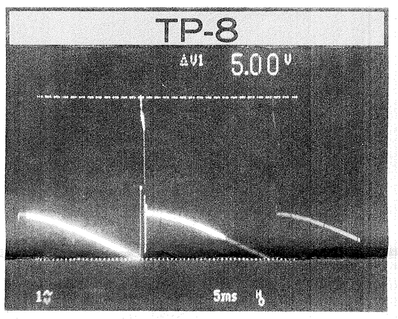


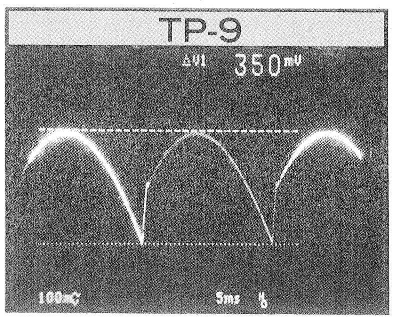


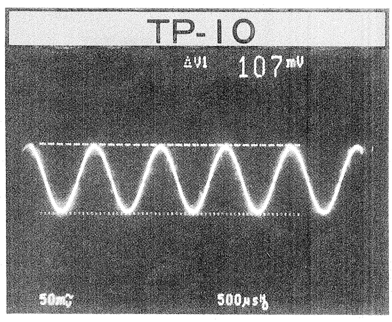


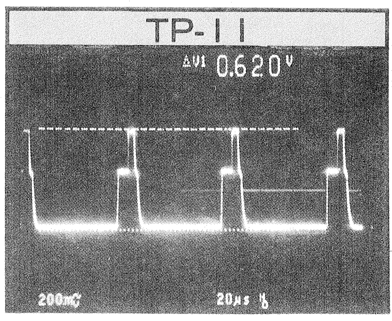


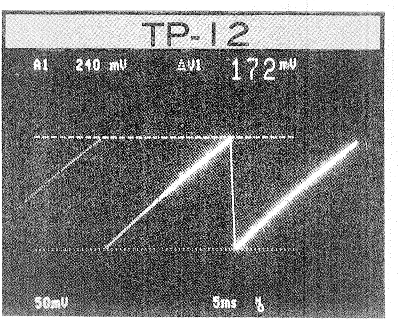


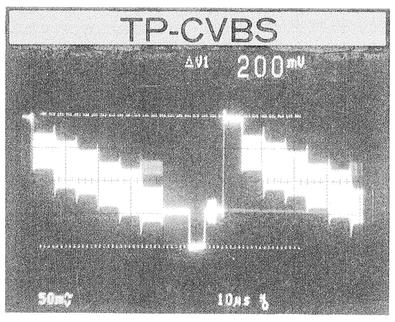




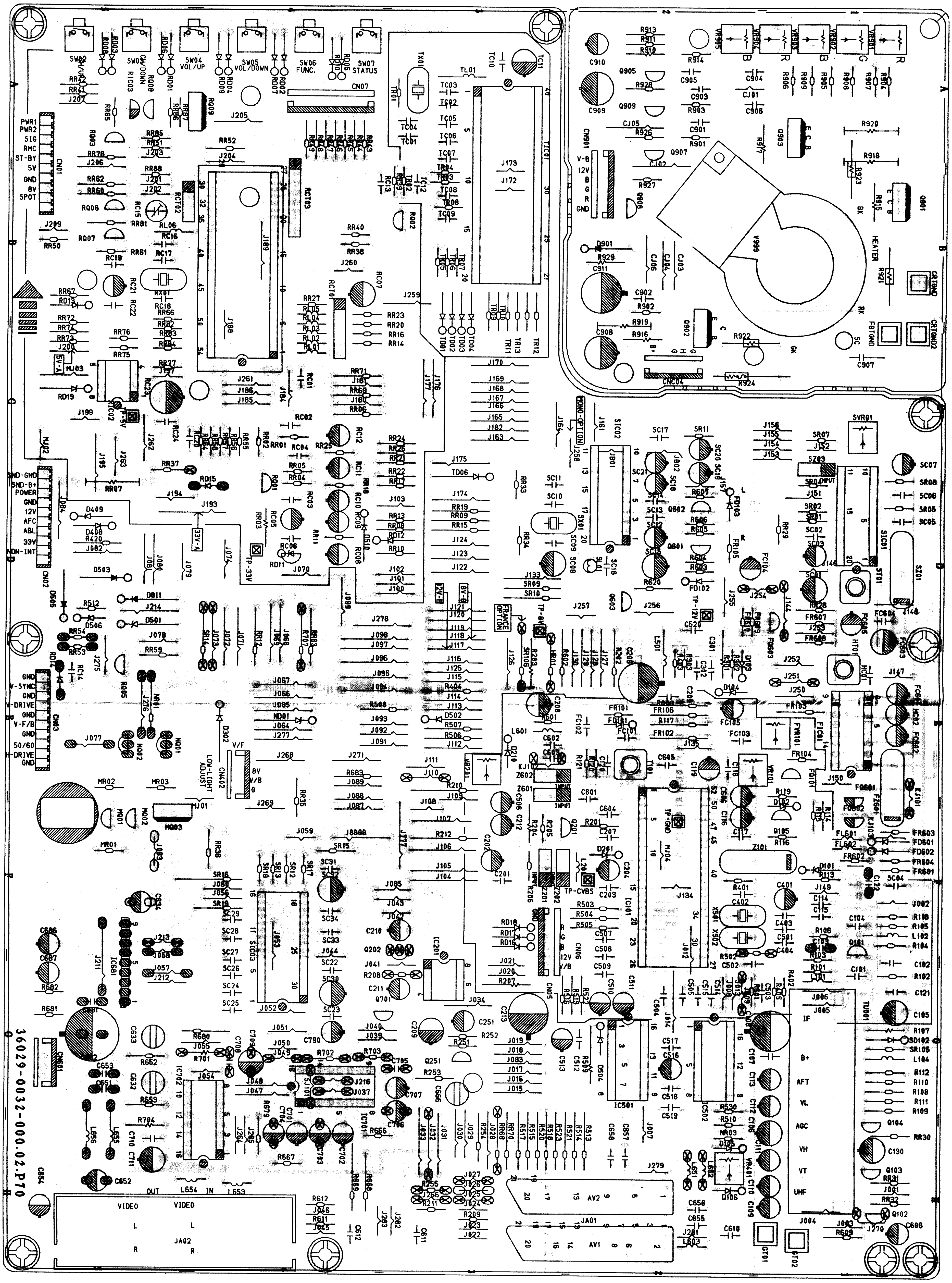




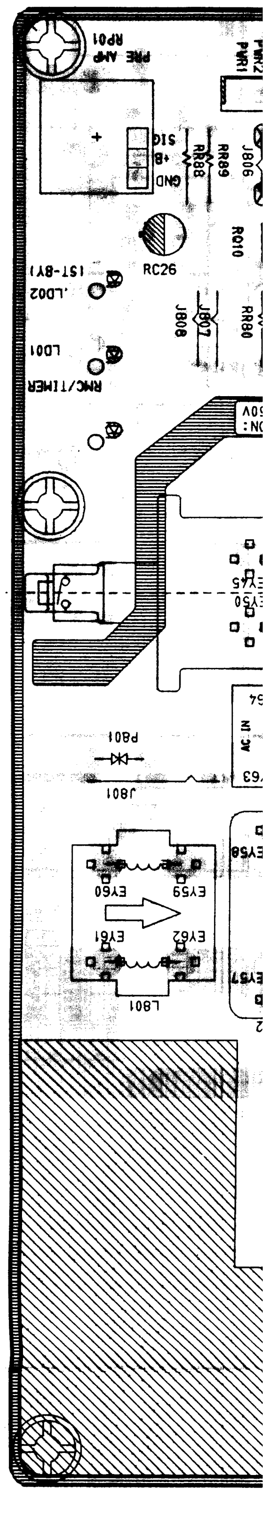




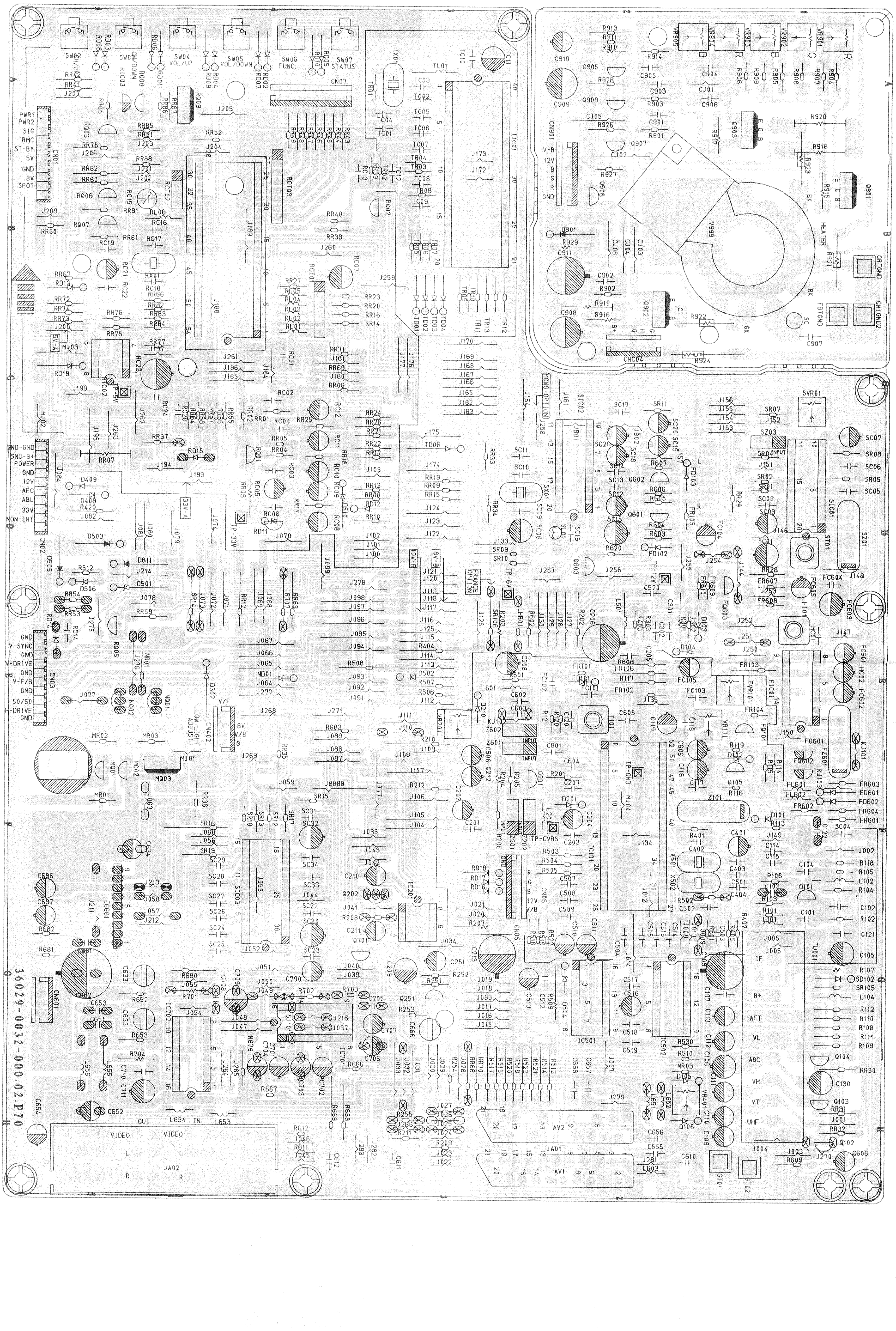
PWB-MAIN


SW02 CH/UP
SW03 CH/DOWN
SW04 VOL/UP
SW05 VOL/DOWN
SW06 FUNC.
SW07 STATUS
CN01
PWR1
PWR2
SIG
RMC
ST-BY
5V
GND
8V
SPOT
CN02
SND-GND
SND-B+
POWER
GND
12V
AFC
ABL
33V
NON-INT
CN03
GND
V-SYNC
GND
V-DRIVE
GND
V-F/B
GND
50/60
H-DRIVE
GND
CN07
TX01
IC01
CN901
V-B
12V
B
G
R
GND
CNC04
V999
HEATER
BK
RK
GK
SC
FBTGND
CRTGND
CRTGND2
MONO-OPTION
FRANCE OPTION
TP-33V
TP-8V
TP-12V
TP-GND
TP-CVBS
TP-5V
LOW-LIGHT ADJUST
V/F
CN402
8V
V/B
IC101
IC201
IC501
IC502
IC681
IC701
IC702
SIC01
SIC02
SIC03
TU001
IF
B+
AFT
VL
AGC
VH
VT
UHF
CN05
CN06
AV1
AV2
JA01
JA02
VIDEO
L
R
OUT
IN
L654
L653
GT01
GT02
INPUT
36029-0032-000.02.P70

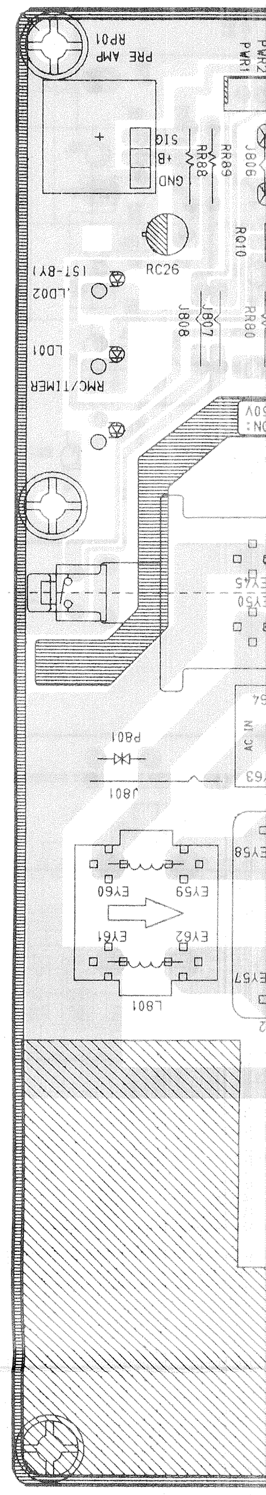
PWB-POW


PWR1
PWR2
PRE AMP
RP01
DIS
B+
GND
1ST-BY1
LD02
LD01
RMC/TIMER
P801
J801
EY50
EY51
EY52
EY59
L801

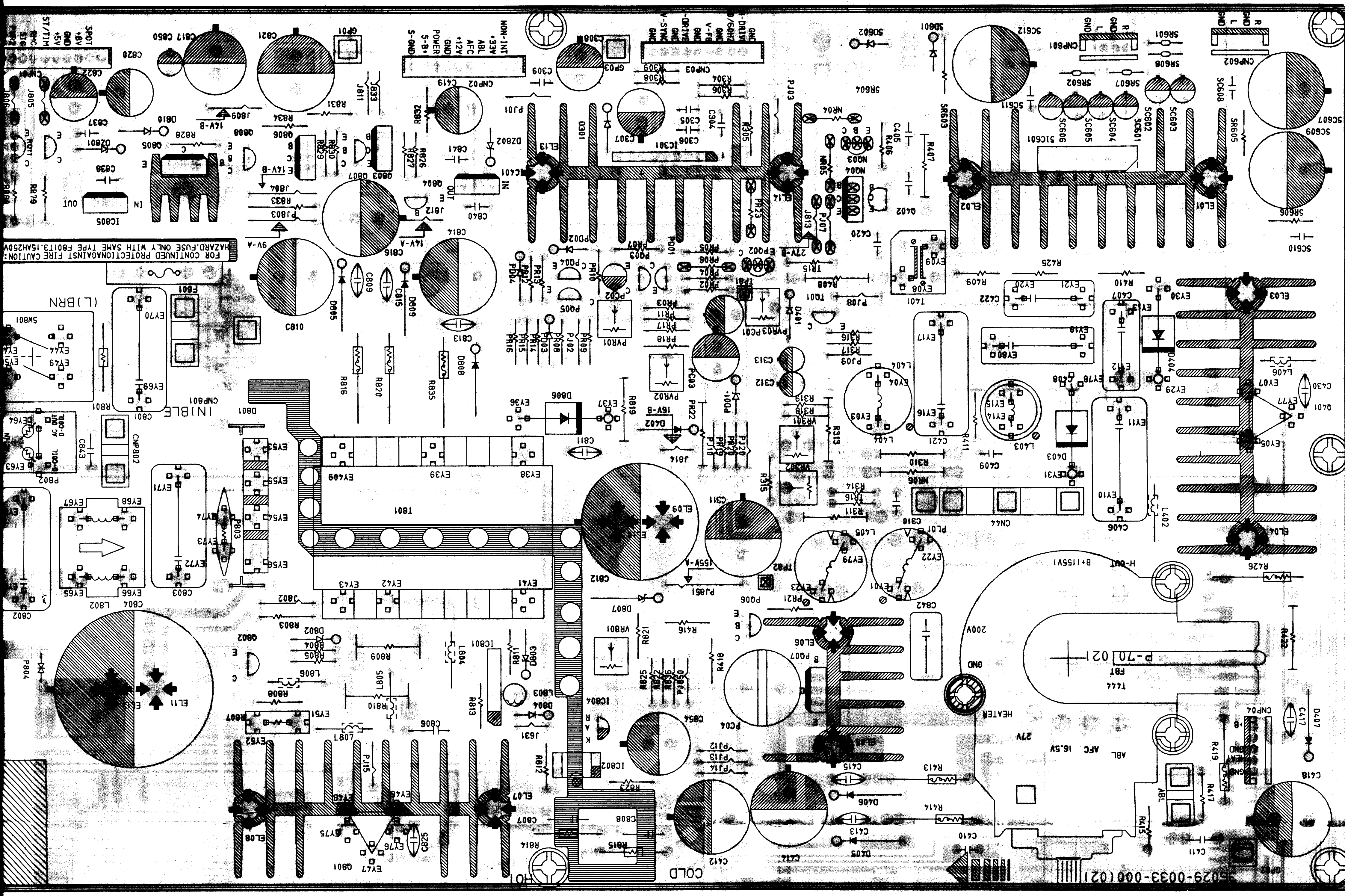
PWB-MAIN


SW02 CH/UP
SW03 CH/DOWN
SW04 VOL/UP
SW05 VOL/DOWN
SW06 FUNC.
SW07 STATUS
PWR1
PWR2
SIG
RMC
ST-BY
5V
GND
8V
SPOT
CN01
SND-GND
SND-B+
POWER
GND
12V
AFC
ABL
33V
NON-INT
CN02
GND
V-SYNC
GND
V-DRIVE
GND
V-F/B
GND
50/60
H-DRIVE
GND
CN03
V-B
12V
B
G
R
GND
CN901
HEATER
FBTGND
CRTGND
CRTGND2
CNC04
V999
LOW-LIGHT ADJUST
CN402
MONO-OPTION
FRANCE OPTION
TP-33V
TP-5V
TP-12V
TP-CVBS
TP-GND
IF
B+
AFT
VL
AGC
VH
VT
UHF
TU001
AV1
AV2
JA01
JA02
VIDEO
OUT
IN
36029-0032-000.02.P70

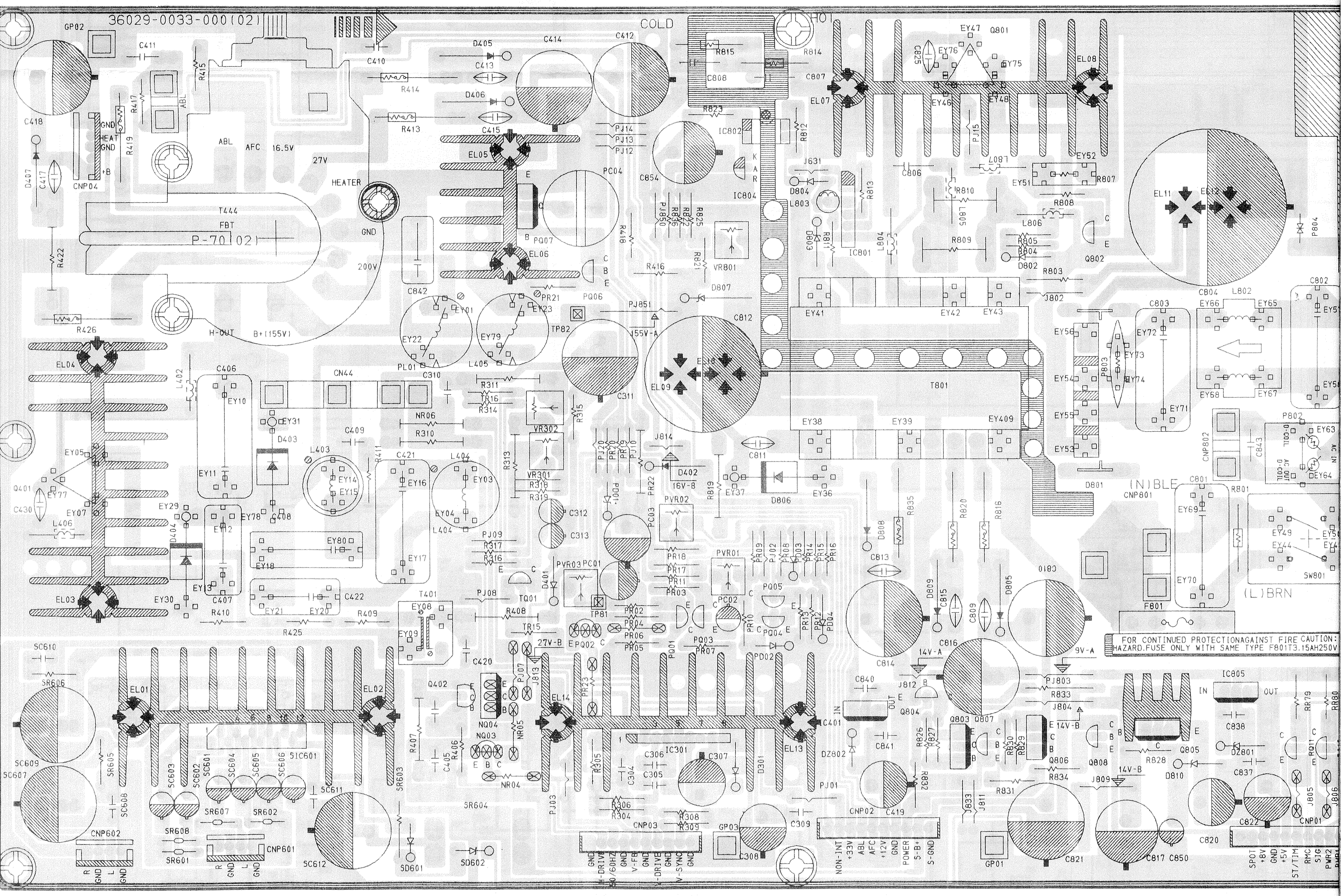
PWB-POW


PWR1
PRE AMP
RP01
SIG
B+
GND
RMC/TIMER
LD01
L801

VER

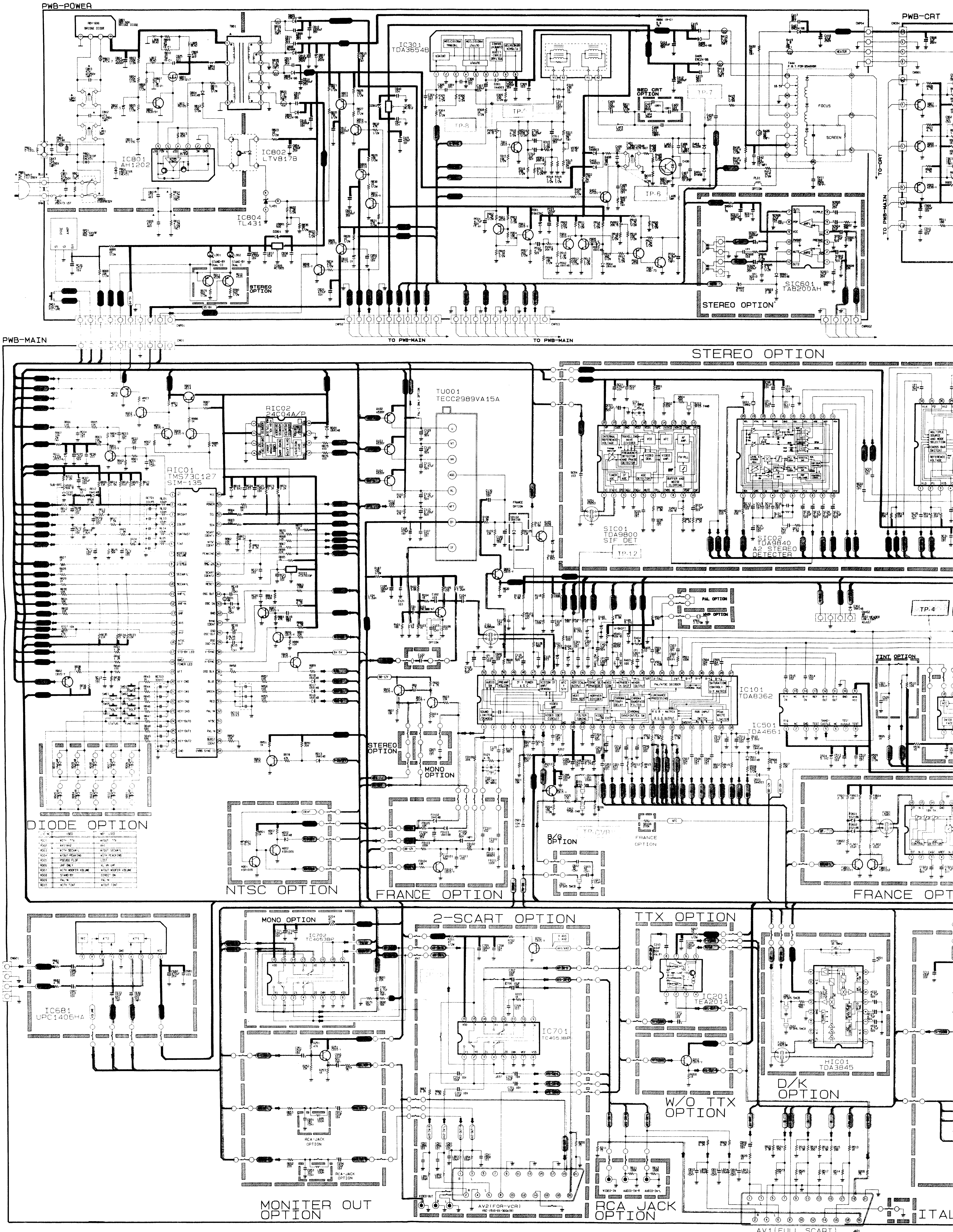

CAUTION: FOR CONTINUED PROTECTION AGAINST FIRE HAZARD, FUSE ONLY WITH SAME TYPE F801T3.15AH250V
(L)BRN
(N)BLE
T801
FBT
T444
P-70(02)
HEATER
COLD
HOT
H-OUT
B+(155V)
200V
GND
ABL
AFC
16.5V
27V
155V-A
14V-A
14V-B
9V-A
16V-B
27V-B
CNP02
CNP03
CNP601
CNP602
CNP801
CNP802
CN44
CNP04
IC301
IC401
IC601
IC801
IC802
IC805
NON-INT
+33V
+12V
POWER
S-B+
S-GND
V-SYNC
V-DRIVE
H-DRIVE
V-FB
H-SYNC
56029-0033-000(02)

VER


36029-0033-000(02)
COLD
HOT
FOR CONTINUED PROTECTIONAGAINST FIRE CAUTION:
HAZARD.FUSE ONLY WITH SAME TYPE F801T3.15AH250V
(N)BLE
(L)BRN
T444
FBT
P-70(02)
HEATER
GND
200V
H-OUT
B+(155V)
ABL
AFC
16.5V
27V
155V-A
16V-B
27V-B
14V-A
14V-B
9V-A
T801
IC301
IC601
IC801
IC802
IC804
IC805
F801
NON-INT
+33V
ABL
AFC
+12V
GND
POWER
S-B+
S-GND
H-DRIVE
50/60HZ
V-FB
V-DRIVE
V-SYNC
GND
SPOT
+8V
GND
+5V
ST/TIM
RMC
SIG
PWR2
CNP01
CNP02
CNP03
CNP04
CNP601
CNP602
CNP801
CNP802

SCHEMATIC DIAGRAM

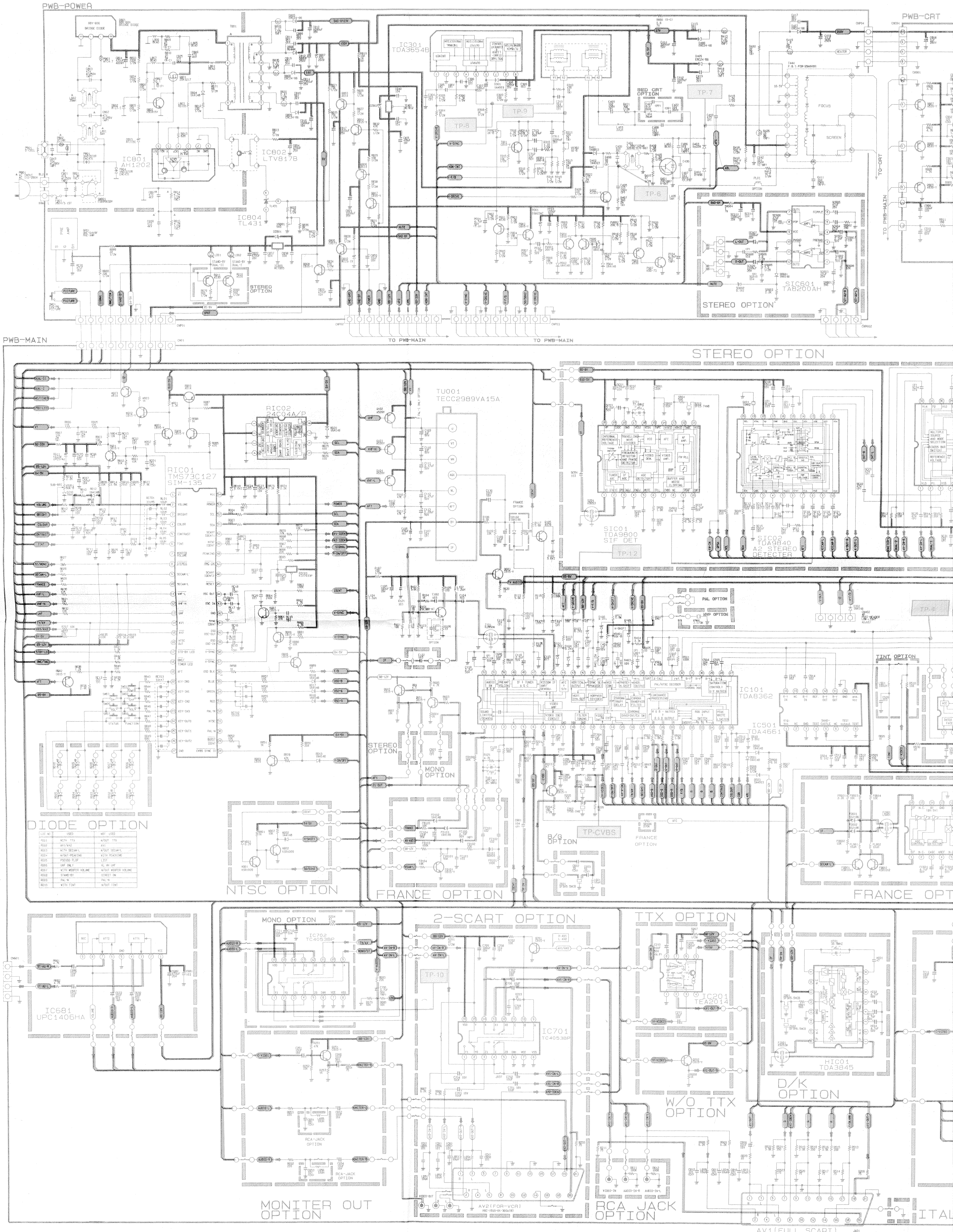
CHASSIS: P70
MODEL: 6835, 5935
SYSTEM: PAL, SECAM-B/G, D/K, PAL-I
NT4.43, NT3.58 (VIT), SECAM-L′/L



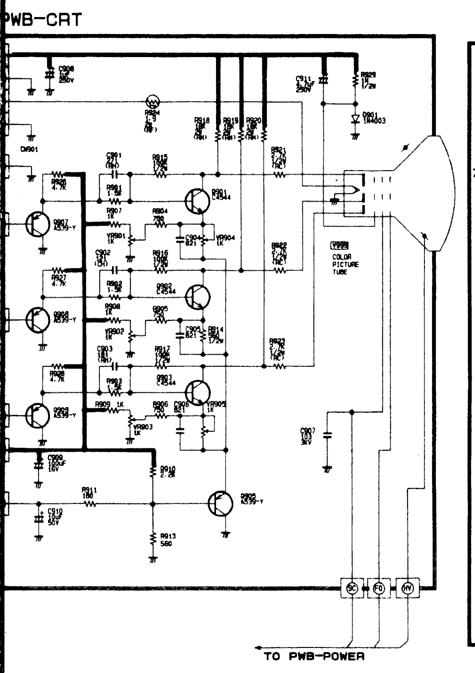
PWB-POWER
PWB-CRT
IC801 AH1202
IC802 LTV817B
IC804 TL431
IC301 TDA3654B
STEREO OPTION
SIC601 TA8200AH
TO PWB-MAIN
TO CRT
FOCUS
SCREEN
IP-6
IP-7
PWB-MAIN
STEREO OPTION
TU001 TECC2989VA15A
RIC02 24C04A/P
RIC01 TMS73C127 SIM-135
SIC01 TDA9800 SIF DET
SIC02 TDA9840 A2 STEREO DETECTER
IC101 TDA8362
IC501 TDA4661
TP-4
TINT OPTION
PAL OPTION
STEREO OPTION
MONO OPTION
DIODE OPTION
NTSC OPTION
FRANCE OPTION
B/G OPTION
FRANCE OPTION
FRANCE OPT
IC681 UPC1406HA
MONO OPTION
IC702 TC4053BP
2-SCART OPTION
IC701 TC4053BP
TTX OPTION
IC201 TEA2014
HIC01 TDA3845
D/K OPTION
W/O TTX OPTION
RCA-JACK OPTION
MONITER OUT OPTION
AV2 (FOR-VCR)
RCA JACK OPTION
AV1 (FULL SCART)
ITAL

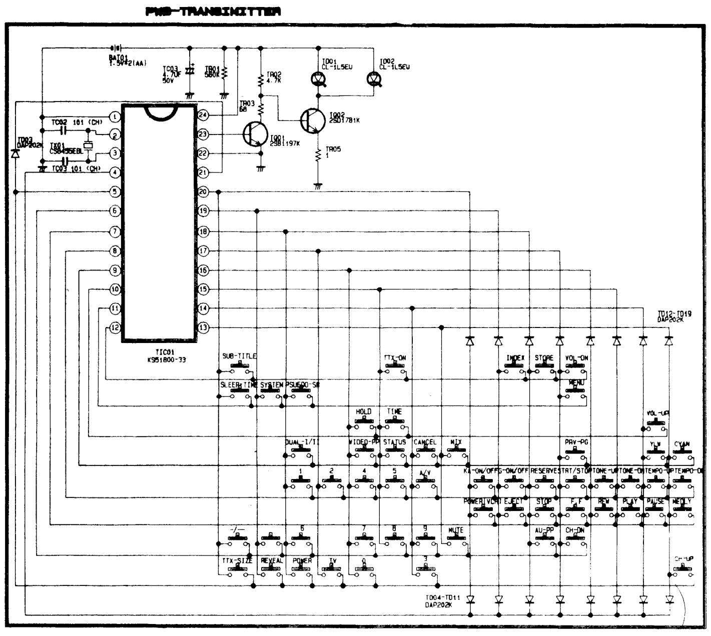
SCHEMATIC DIAGRAM

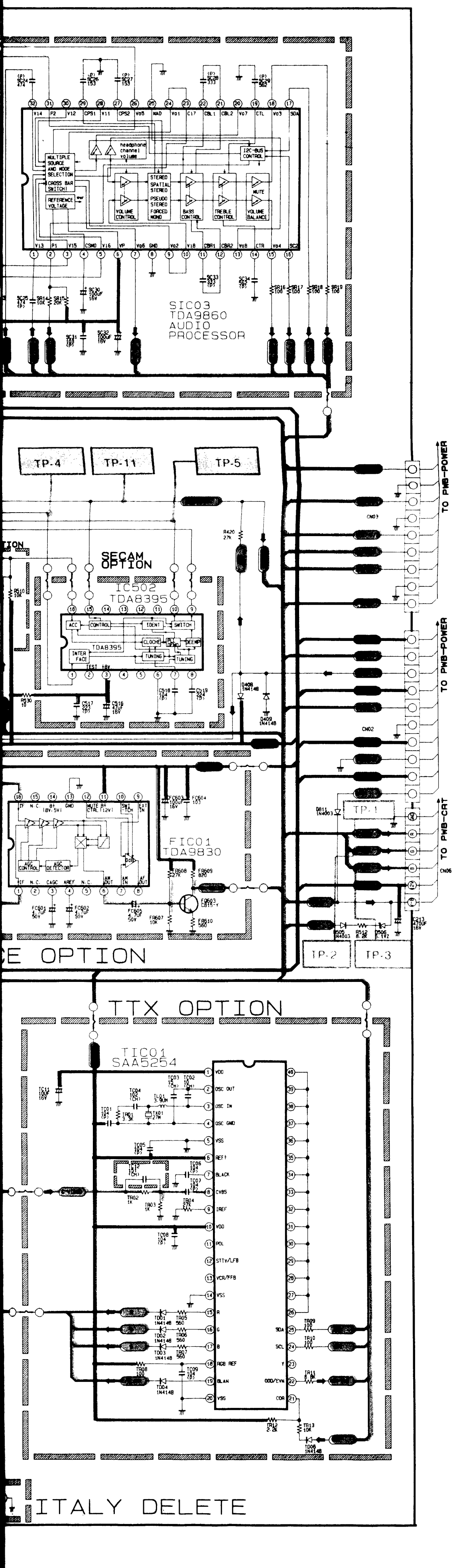
CHASSIS: P70
MODEL: 6835, 5935
SYSTEM: PAL, SECAM-B/G, D/K, PAL-I
NT4.43, NT3.58(VIT), SECAM-L′/L



PWB-POWER
PWB-CRT
PWB-MAIN
IC801 AH1202
IC802 LTV817B
IC804 TL431
IC301 TDA3654B
TP-8
TP-9
TP-7
TP-6
SED CRT OPTION
STEREO OPTION
SIC601 TA8200AH
TO PWB-MAIN
TO CRT
FOCUS
SCREEN
HEATER
STEREO OPTION
TU001 TECC2989VA15A
RIC02 24C04A/P
RIC01 TMS73C127 SIM-135
SIC01 TDA9800 SIF DET
SIC02 TDA9840 A2 STEREO DETECTER
TP-12
PAL OPTION
TINT OPTION
IC101 TDA8362
IC501 TDA4661
STEREO OPTION
MONO OPTION
B/G OPTION
TP-CVBS
FRANCE OPTION
DIODE OPTION
NTSC OPTION
FRANCE OPTION
FRANCE OPT
IC681 UPC1406HA
MONO OPTION
IC702 TC4053BP
2-SCART OPTION
TP-10
IC701 TC4053BP
TTX OPTION
IC201 TEA2014
W/O TTX OPTION
HIC01 TDA3845
D/K OPTION
MONITER OUT OPTION
RCA-JACK OPTION
AV2(FOR-VCR)
RCA JACK OPTION
AV1(FULL SCART)
ITAL







LOC.	25INCH	28INCH
PR20	1/2W 3.3K	1/2W 6.8K
PR19	1/2W 3.3K	1/2W 2.7K

EXPRESSION

1 Resistance is shown ohm K=1.000 M=1.000.000

2 Unless otherwise noted in schematic all capacitor values less than 1 are expressed in ufd. the values more than 1 in pF.

3 Unless otherwise noted in schematic all inductor values areexpressed in uH.and the values less than 1 in mH.

NOTE

The circuits are subject to change without notice to improve the picture quality.

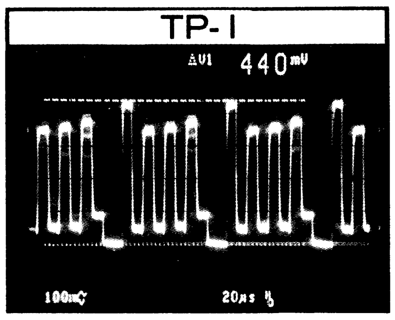
RESISTOR	
Carbon	No Mark
Composition	(RC)
Metal Oxide	(RS)
Metal Film	(RN)
Fusible	(RF)
Cement.Wire	(RW)
Network	(RN)

CAPACITOR	
Ceramic - SL	No Mark
Ceramic - RH	(RH)
Ceramic - CH	(CH)
Polyester(Induct)	(P)
Polyester(Noninduct)	(PNU)
Polypropylene	(PP)
Metal Polyester	(MP)
M.P.Polypropylene	(MPP)
Tantalium	(T)
Non Polar	(NP)

DIFFERNT PARTS FOR SYSTEM

LOC NO	PAL-B/G	PAL/SECAM -B.G	PAL/SECAM -B.G.D.K	PAL-I	SECAM-L/L'
IC502	DELETE	TDA8395	TDA8395	DELETE	TDA8395
C517	DELETE	POLY 223	POLY 223	DELETE	POLY 223
C516	DELETE	16V 47uF	16V 47uF	DELETE	16V 47uF
C518	DELETE	POLY 104	POLY 104	DELETE	POLY 104
C519	DELETE	POLY 224	POLY 224	DELETE	POLY 224
R530	DELETE	10	10	DELETE	10
FIC01	DELETE	DELETE	TDA3845	DELETE	TDA9830
L601	10UH	10UH	DELETE	10UH	10UH
Z101	OFWG1956	OFWG1956	G3963M	K2950M	K2950M
Z201	TPS5.5MW	TPS5.5MW	TPS5.5MW	DELETE	TPS5.5MW
Z202	TPS6.0MB	TPS6.0MB	TPS6.5MB	TPS6.0MB	TPS6.0MB
Z601	SFSH5.5MCB	SFSH5.5MCB	SFSH5.5MCB	DELETE	SFSH5.5MCB
Z602	DELETE	DELETE	SFSH6.5MCB	SFE6.0MB	DELETE
FR101	DELETE	DELETE	DELETE	DELETE	100K
FR604	DELETE	DELETE	DELETE	DELETE	10K
FD602	DELETE	DELETE	DELETE	DELETE	1S2186
FD601	DELETE	DELETE	DELETE	DELETE	1S2186
FR603	DELETE	DELETE	DELETE	DELETE	10K
FZ601	DELETE	DELETE	K9253M	DELETE	L9461
FR602	DELETE	DELETE	DELETE	DELETE	10K
C122	DELETE	DELETE	103	DELETE	103
FL602	DELETE	DELETE	DELETE	DELETE	10UH
FL601	DELETE	DELETE	DELETE	DELETE	10UH
FQ602	DELETE	DELETE	DELETE	DELETE	KSR1012
FQ601	DELETE	DELETE	DELETE	DELETE	KSR1011
FC602	DELETE	DELETE	DELETE	DELETE	4.7UF 50V
FC601	DELETE	DELETE	DELETE	DELETE	50V 4.7UF
FC603	DELETE	DELETE	DELETE	DELETE	16V 100UF
FQ101	DELETE	DELETE	DELETE	DELETE	C815-Y
FR104	DELETE	DELETE	DELETE	DELETE	10K
FVR101	DELETE	DELETE	DELETE	DELETE	50K-B
FR103	DELETE	DELETE	DELETE	DELETE	100K
FC103	DELETE	DELETE	DELETE	DELETE	103
FC105	DELETE	DELETE	DELETE	DELETE	50V 4.7UF
FR102	DELETE	DELETE	DELETE	DELETE	33K
FC101	DELETE	DELETE	DELETE	DELETE	102
FD101	DELETE	DELETE	DELETE	DELETE	BB809
FC102	DELETE	DELETE	DELETE	DELETE	102
FQ603	DELETE	DELETE	DELETE	DELETE	C815-Y
FR608	DELETE	DELETE	DELETE	DELETE	27K
FR607	DELETE	DELETE	DELETE	DELETE	10K
FR609	DELETE	DELETE	DELETE	DELETE	820
FR610	DELETE	DELETE	DELETE	DELETE	560
FC104	DELETE	DELETE	DELETE	DELETE	35V 22UF
FR105	DELETE	DELETE	DELETE	DELETE	10K
FD103	DELETE	DELETE	DELETE	DELETE	1N4148
FD102	DELETE	DELETE	DELETE	DELETE	1N4148
RR29	DELETE	DELETE	DELETE	DELETE	1K
RR33	DELETE	DELETE	DELETE	DELETE	10K
RR34	DELETE	DELETE	DELETE	DELETE	3.3K

TP-1



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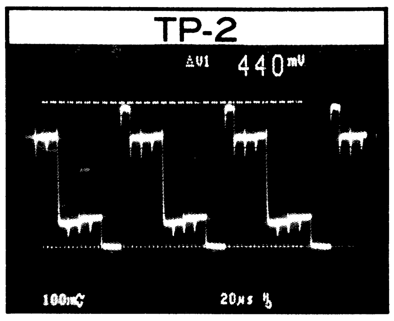

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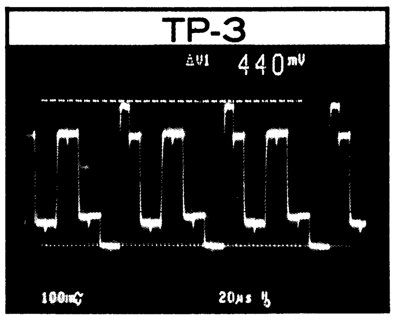

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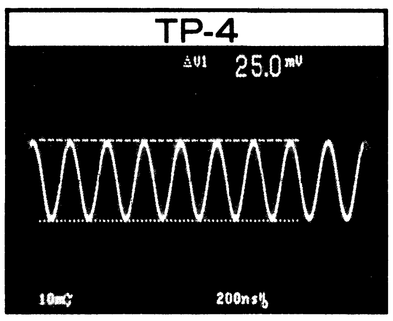

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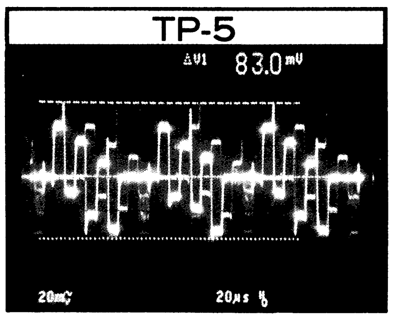

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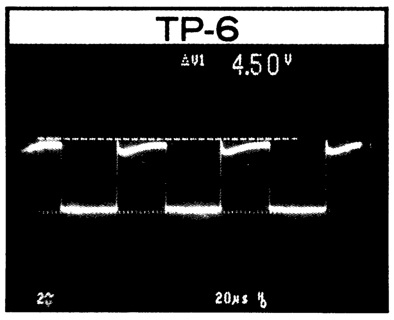

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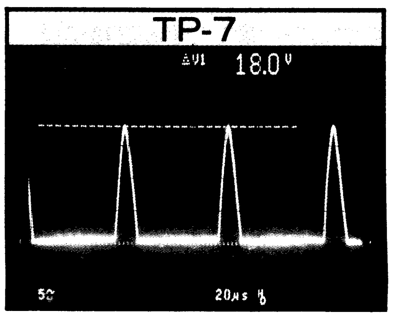

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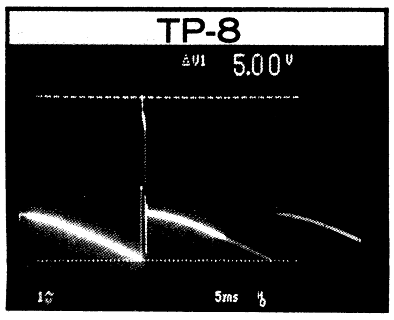
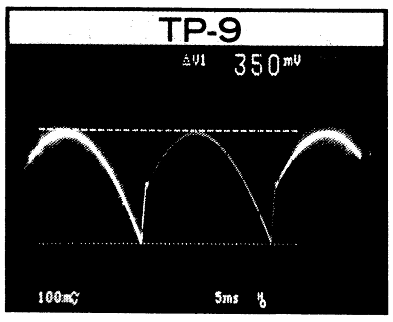


TP-9



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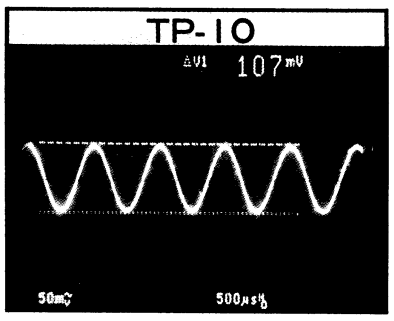

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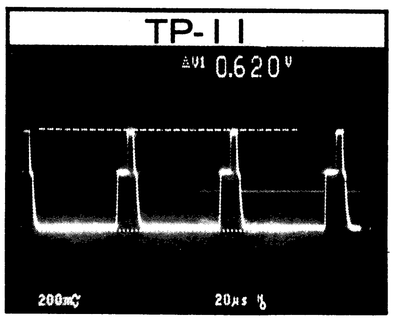

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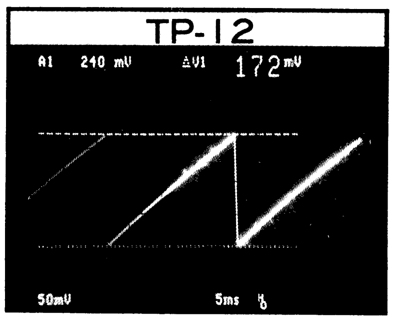
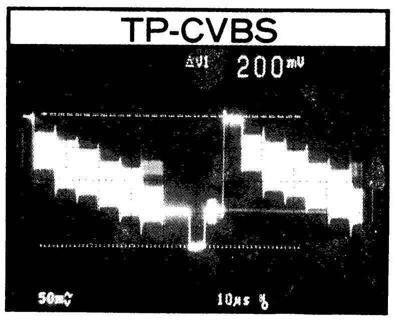
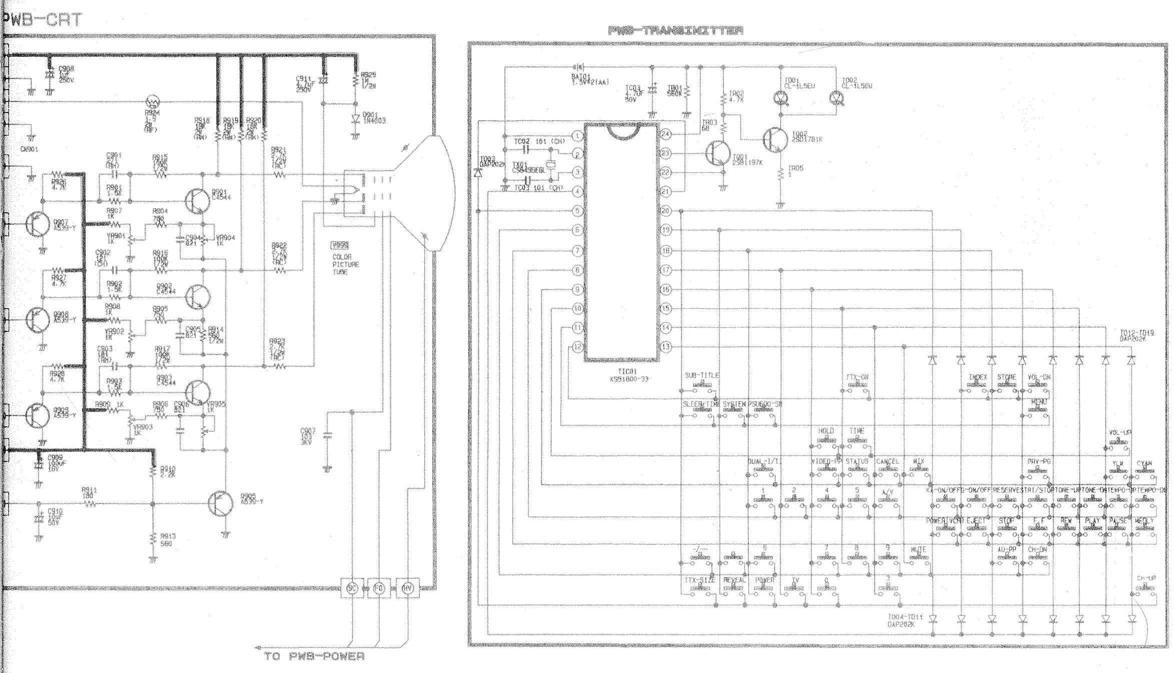


TP-CVBS

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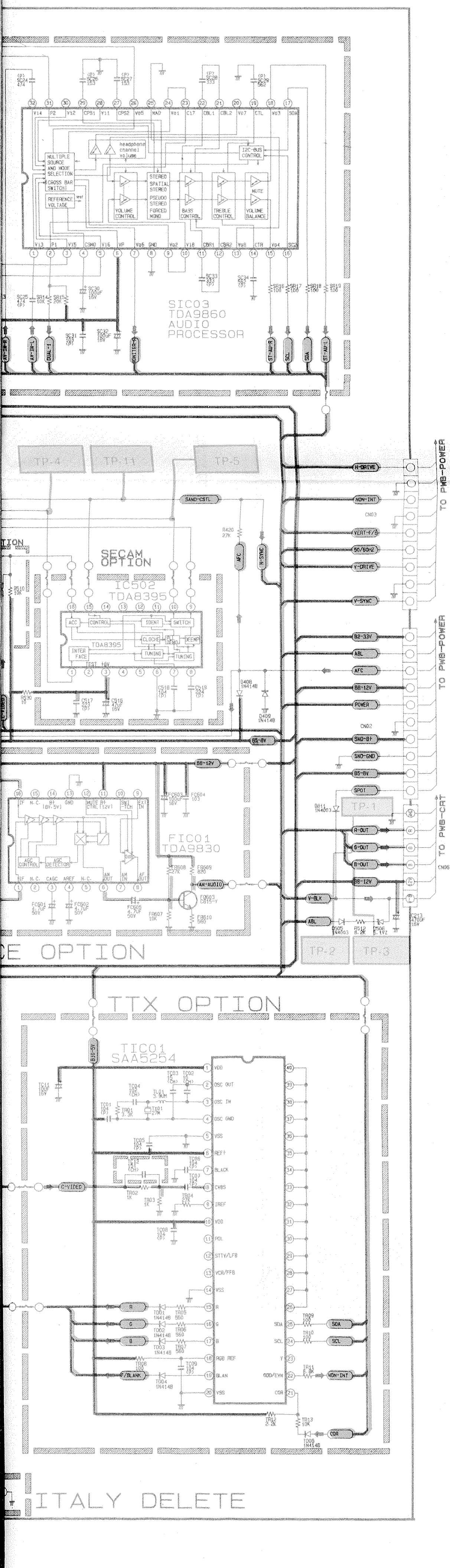
COLOR PICTURE TUBE
PWB-TRANSMITTER
TIC01
SUB-TITLE
TTX-ON
INDEX
STORE
VOL-DN
MIX
HOLD
TIME
CANCEL
VOL-UP
TTX-SIZE
REVEAL
POWER
TV
MUTE
CH-UP
T004-T011 DAP202K
TO PWB-POWER


SIC03
TDA9860
AUDIO
PROCESSOR
TP-4
TP-11
TP-5
SECAM OPTION
IC502
TDA8395
TO PWB-POWER
TO PWB-POWER
TP-1
FIC01
TDA9830
TO PWB-CRT
CE OPTION
TP-2
TP-3
TTX OPTION
TIC01
SAA5254
SDA
SCL
ITALY DELETE

LOC.	25INCH	28INCH
PR20	1/2W 3.3K	1/2W 6.8K
PR19	1/2W 3.3K	1/2W 2.7K

EXPRESSION

1 Resistance is shown ohm K=1.000 M=1.000.000

2 Unless otherwise noted in schematic all capacitor values less than 1 are expressed in ufd. the values more than 1 in pF.

3 Unless otherwise noted in schematic all inductor values are expressed in uH. and the values less than 1 in mH.

NOTE

The circuits are subject to change without notice to improve the picture quality.

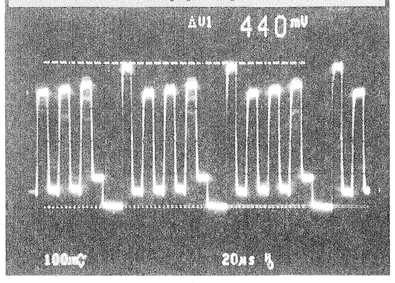
RESISTOR	
Carbon	No Mark
Composition	(RC)
Metal Oxide	(RS)
Metal Film	(RN)
Fusible	(RF)
Cement, Wire	(RW)
Network	(RN)

CAPACITOR	
Ceramic - SL	No Mark
Ceramic - RH	(RH)
Ceramic - CH	(CH)
Polyester(Induct)	(P)
Polyester(Noninduct)	(PNU)
Polypropylene	(PP)
Metal Polyester	(MP)
M.P.Polypropylene	(MPP)
Tantalium	(T)
Non Polar	(NP)

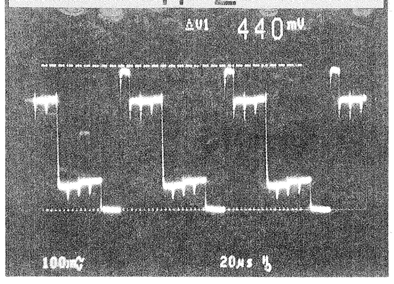
DIFFERNT PARTS FOR SYSTEM

LOC NO	PAL-B/G	PAL/SECAM -B.G	PAL/SECAM -B.G.D.K	PAL-I	SECAM-L/L'
IC502	DELETE	TDA8395	TDA8395	DELETE	TDA8395
C517	DELETE	POLY 223	POLY 223	DELETE	POLY 223
C516	DELETE	16V 47uF	16V 47uF	DELETE	16V 47uF
C518	DELETE	POLY 104	POLY 104	DELETE	POLY 104
C519	DELETE	POLY 224	POLY 224	DELETE	POLY 224
R530	DELETE	10	10	DELETE	10
FIC01	DELETE	DELETE	TDA3845	DELETE	TDA9830
L601	10UH	10UH	DELETE	10UH	10UH
Z101	OFWG1956	OFWG1956	G3963M	K2950M	K2950M
Z201	TPS5.5MW	TPS5.5MW	TPS5.5MW	DELETE	TPS5.5MW
Z202	TPS6.0MB	TPS6.0MB	TPS6.5MB	TPS6.0MB	TPS6.0MB
Z601	SFSH5.5MCB	SFSH5.5MCB	SFSH5.5MCB	DELETE	SFSH5.5MCB
Z602	DELETE	DELETE	SFSH6.5MCB	SFE6.0MB	DELETE
FR101	DELETE	DELETE	DELETE	DELETE	100K
FR604	DELETE	DELETE	DELETE	DELETE	10K
FD602	DELETE	DELETE	DELETE	DELETE	1S2186
FD601	DELETE	DELETE	DELETE	DELETE	1S2186
FR603	DELETE	DELETE	DELETE	DELETE	10K
FZ601	DELETE	DELETE	K9253M	DELETE	L9461
FR602	DELETE	DELETE	DELETE	DELETE	10K
C122	DELETE	DELETE	103	DELETE	103
FL602	DELETE	DELETE	DELETE	DELETE	10UH
FL601	DELETE	DELETE	DELETE	DELETE	10UH
FQ602	DELETE	DELETE	DELETE	DELETE	KSR1012
FQ601	DELETE	DELETE	DELETE	DELETE	KSR1011
FC602	DELETE	DELETE	DELETE	DELETE	4.7UF 50V
FC601	DELETE	DELETE	DELETE	DELETE	50V 4.7UF
FC603	DELETE	DELETE	DELETE	DELETE	16V 100UF
FQ101	DELETE	DELETE	DELETE	DELETE	C815-Y
FR104	DELETE	DELETE	DELETE	DELETE	10K
FVR101	DELETE	DELETE	DELETE	DELETE	50K-B
FR103	DELETE	DELETE	DELETE	DELETE	100K
FC103	DELETE	DELETE	DELETE	DELETE	103
FC105	DELETE	DELETE	DELETE	DELETE	50V 4.7UF
FR102	DELETE	DELETE	DELETE	DELETE	33K
FC101	DELETE	DELETE	DELETE	DELETE	102
FD101	DELETE	DELETE	DELETE	DELETE	B6400
FC102	DELETE	DELETE	DELETE	DELETE	102
FQ603	DELETE	DELETE	DELETE	DELETE	C815-Y
FR608	DELETE	DELETE	DELETE	DELETE	27K
FR607	DELETE	DELETE	DELETE	DELETE	10K
FR609	DELETE	DELETE	DELETE	DELETE	820
FR610	DELETE	DELETE	DELETE	DELETE	560
FC104	DELETE	DELETE	DELETE	DELETE	35V 22UF
FR105	DELETE	DELETE	DELETE	DELETE	10K
FD103	DELETE	DELETE	DELETE	DELETE	1N4148
FD102	DELETE	DELETE	DELETE	DELETE	1N4148
RR29	DELETE	DELETE	DELETE	DELETE	1K
RR33	DELETE	DELETE	DELETE	DELETE	10K
RR34	DELETE	DELETE	DELETE	DELETE	3.3K

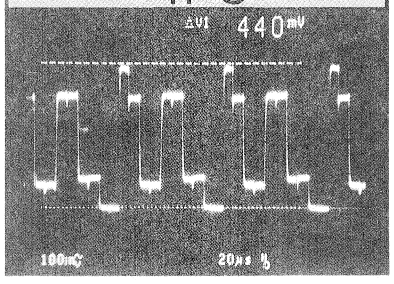
TP-1



TP-2



TP-3



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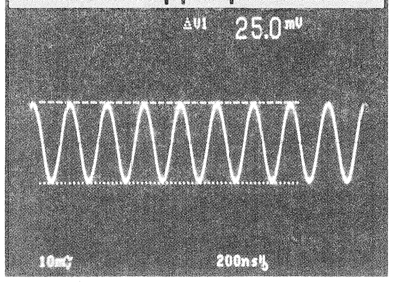

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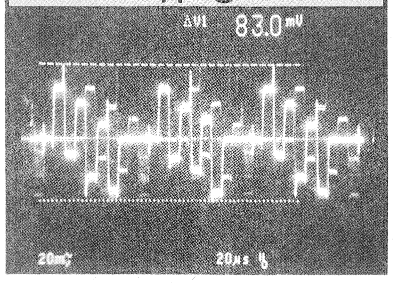

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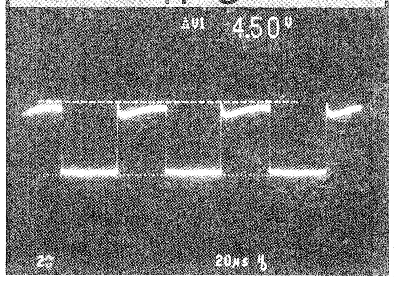

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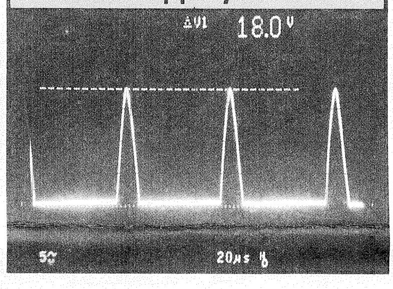

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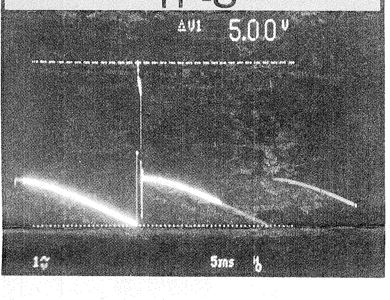
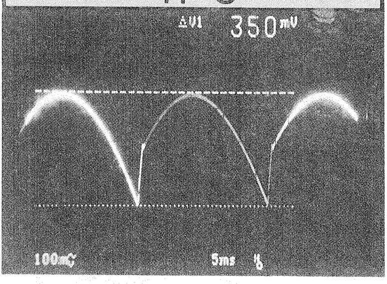


TP-9



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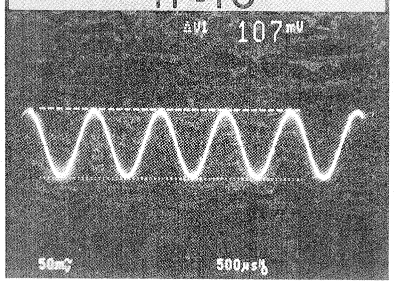

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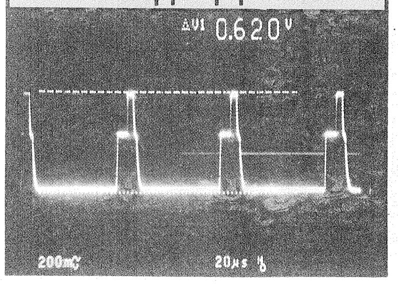

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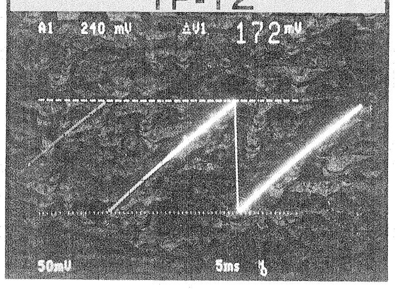
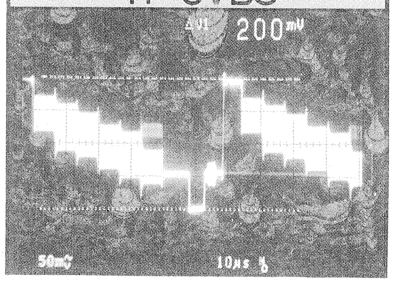
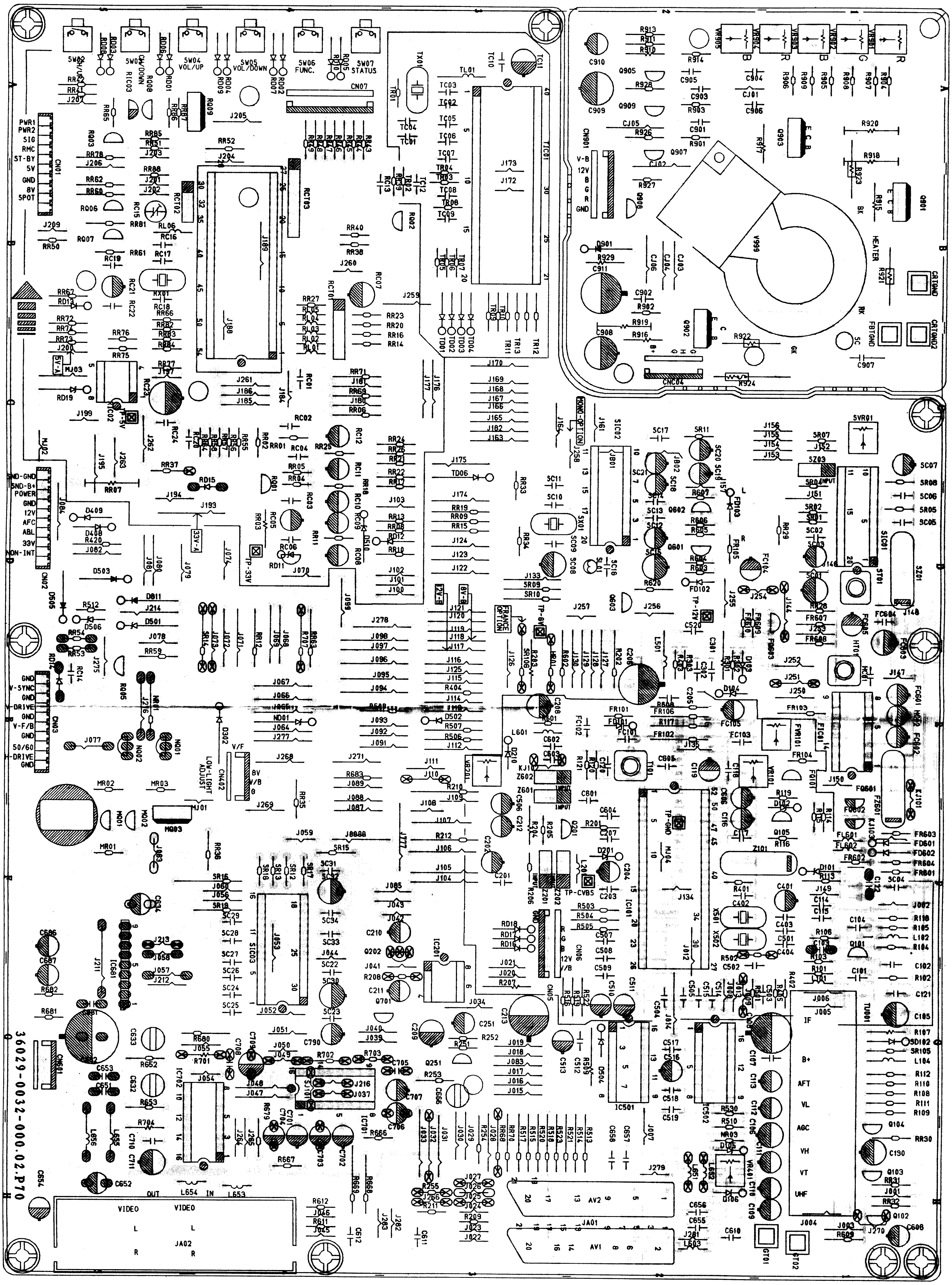


TP-CVBS



PWB-MAIN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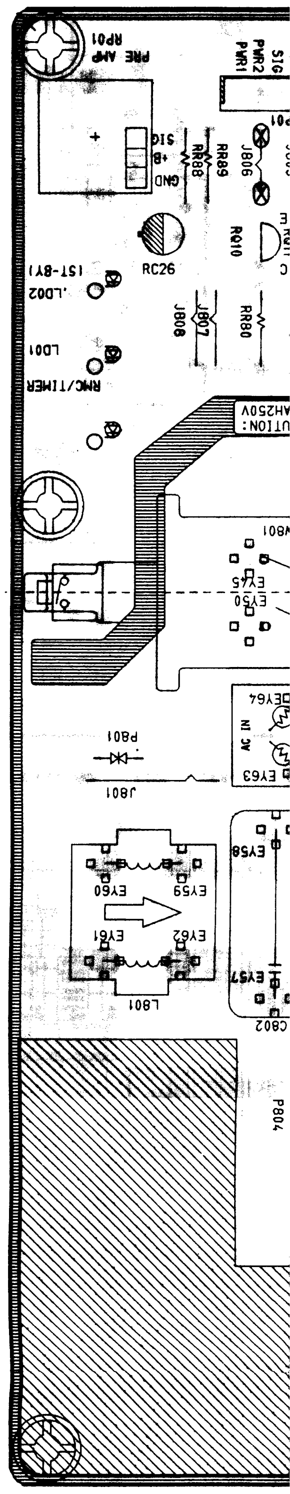
SW03 CH/DOWN
SW04 VOL/UP
SW05 VOL/DOWN
SW06 FUNC.
SW07 STATUS
CN07
TX01
TL01
TC10
TC11
TIC01
CN01
PWR1
PWR2
SIG
RMC
ST-BY
5V
GND
8V
SPOT
J189
J188
RX01
CN901
V-B
12V
B
G
R
GND
VR905
VR904
VR903
VR902
VR901
HEATER
CNC04
C909
C910
C911
C908
Q901
Q902
Q903
Q905
Q907
Q908
Q909
CRT GND
CRT GND2
FBT GND
GK
SC
CN02
GND-GND
GND-B+
POWER
GND
12V
AFC
ABL
33V
NON-INT
J084
TP-33V
33V-A
MONO-OPTION
SIC02
SIC01
SX01
SZ01
SVR01
INPUT
TP-12V
TP-8V
FRANCE OPTION
12V-B
8V-B
CN03
GND
V-SYNC
GND
V-DRIVE
GND
V-F/B
GND
50/60
H-DRIVE
GND
V/F
CN402
LOW-LIGHT ADJUST
8V
V/B
G
MQ03
MO01
MO02
MJ01
MJ02
MJ03
L601
Z601
Z602
C206
L501
T101
TP-GND
MJ04
IC101
TP-CVBS
IC201
CN06
CN05
X501
X502
Z101
IC501
IC502
TU001
IF
B+
AFT
VL
AGC
VH
VT
UHF
SIC03
J053
IC601
IC701
IC702
SJ101
CN601
C213
VIDEO
VIDEO
L
L
R
R
JA02
OUT
IN
L654
L653
JA01
AV2
AV1
GT01
GT02
J004
36029-0032-000.02.P70

PWB-POWE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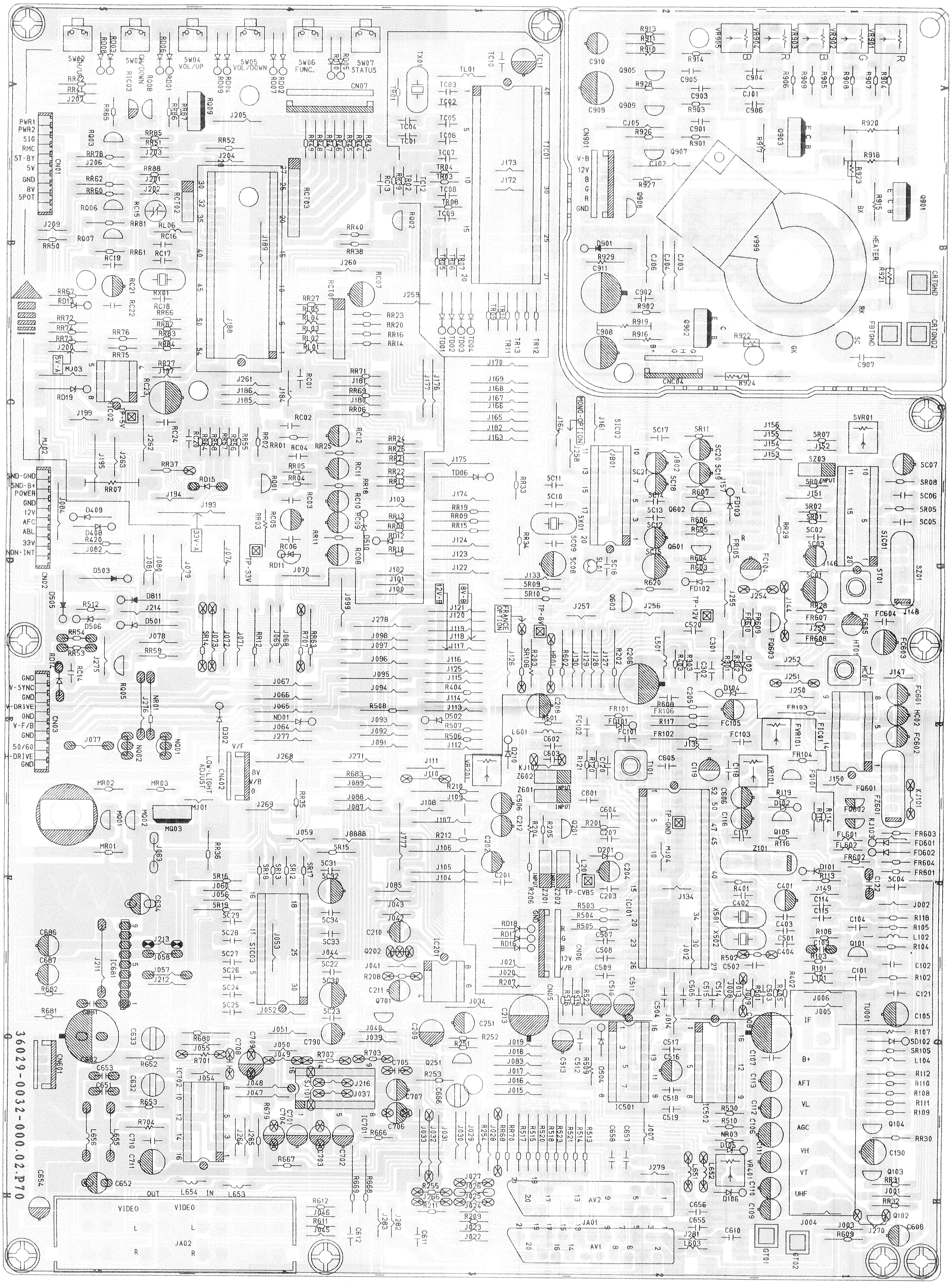
RP01
PWR1
PWR2
SIG
D15
B+
GND
RC26
RR10
RR80
RR88
RR89
LD01
LD02
(ST-BY)
RMC/TIMER
J806
J807
J808
EY53
EY50
EY58
EY59
EY60
EY61
EY62
EY57
EY63
EY64
PB01
JB01
L801
P804
C802

PWB-MAIN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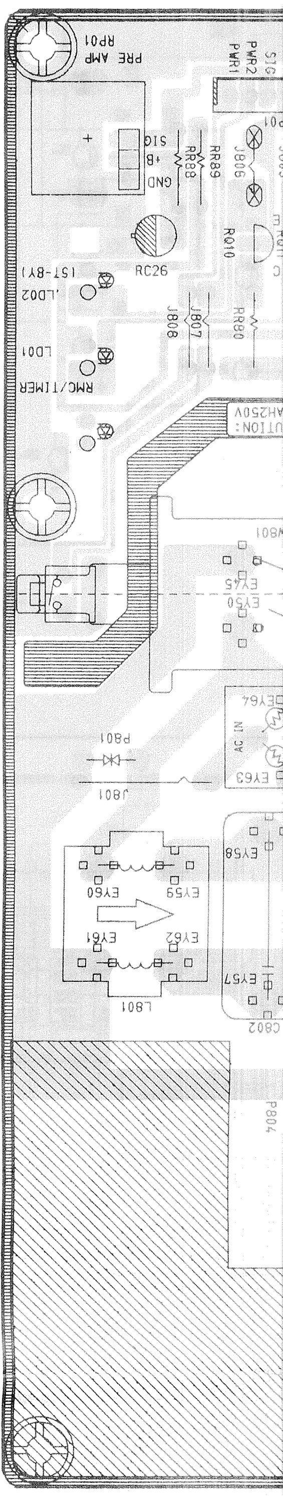
SW03 CH/DOWN
SW04 VOL/UP
SW05 VOL/DOWN
SW06 FUNC.
SW07 STATUS
PWR1
PWR2
SIG
RMC
ST-BY
5V
GND
8V
SPOT
CN01
CN07
TX01
TL01
TC10
TC11
TIC01
J189
J188
SND-GND
SND-B+
POWER
GND
12V
AFC
ABL
33V
NON-INT
CN02
GND
V-SYNC
GND
V-DRIVE
GND
V-F/B
GND
50/60
H-DRIVE
GND
CN03
TP-33V
33V-A
LOW LIGHT ADJUST
CN402
V/F
8V
V/B
G
MONO-OPTION
12V-B
8V-B
FRANCE OPTION
TP-8V
TP-12V
TP-GND
TP-CVBS
IC101
IC201
IC501
IC502
IC701
IC702
SIC01
SIC02
SIC03
TU001
IF
B+
AFT
VL
AGC
VH
VT
UHF
CN901
V-B
12V
B
G
R
GND
V999
HEATER
CRTGND
FBTGND
CRTGND2
CNC04
SVR01
GT01
GT02
AV2
AV1
JA01
JA02
VIDEO
L
R
OUT
IN
36029-0032-000.02.P70

PWB-POWE


PRE AMP
RP01
PWR1
PWR2
RMC/TIMER
RC26
B+
GND
LD01
LD02
PB01
PB04
JB01
LB01
CB02
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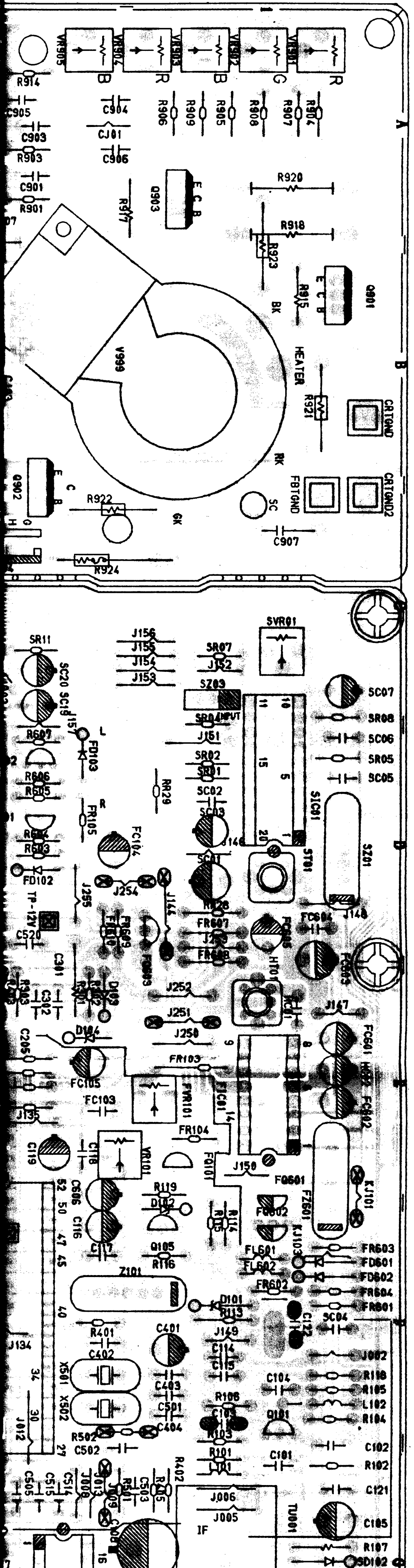
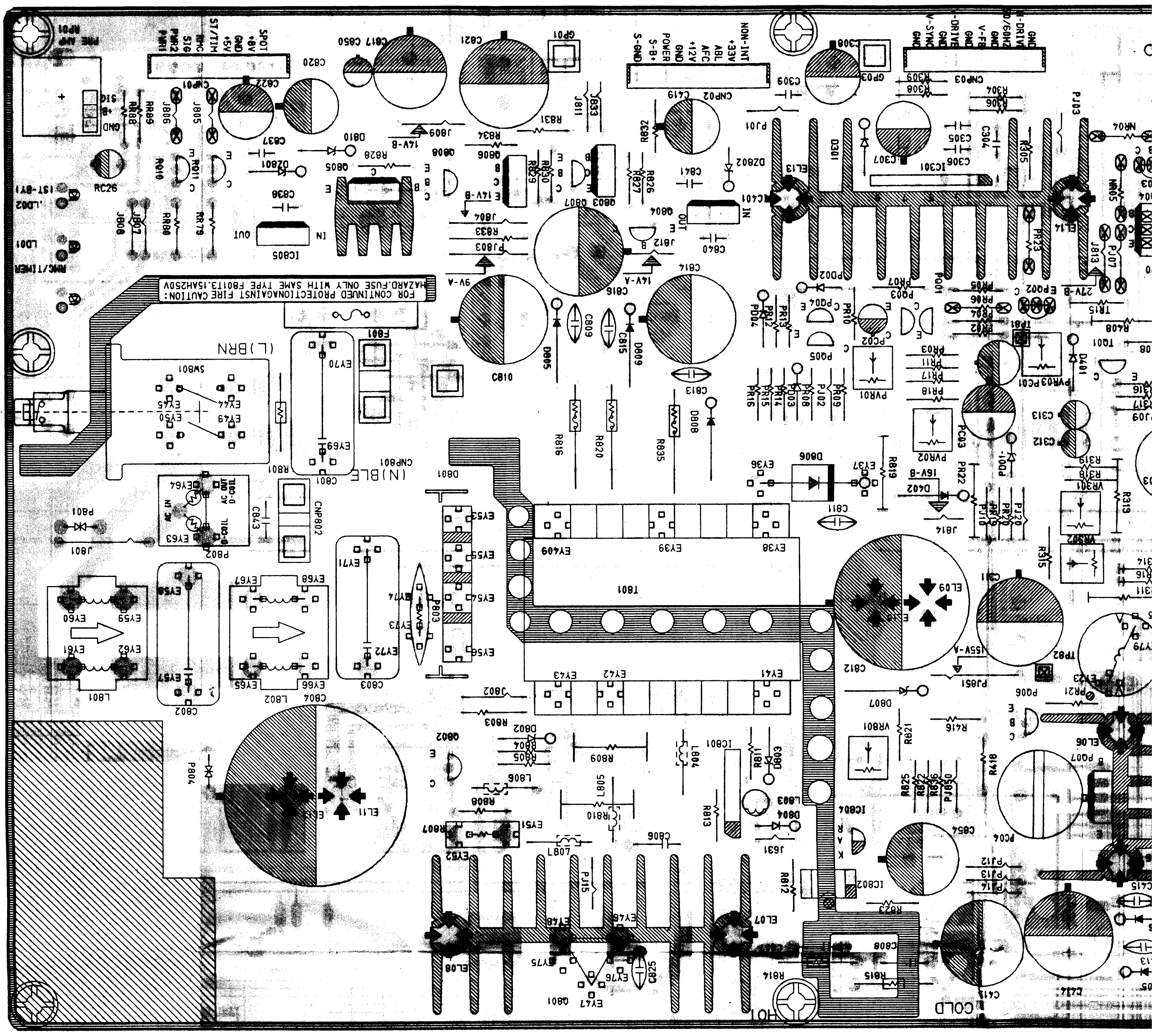
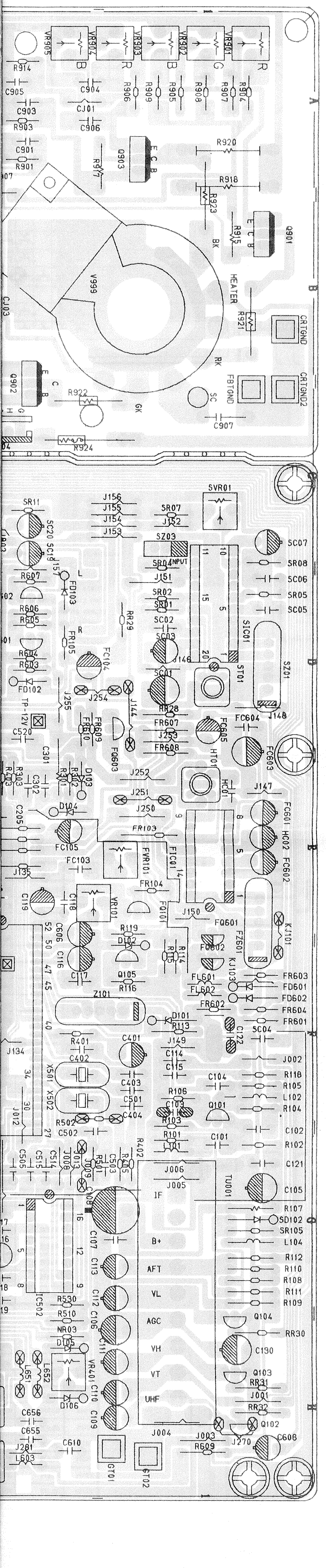
EY61
EY62
EY63
EY64
EY57

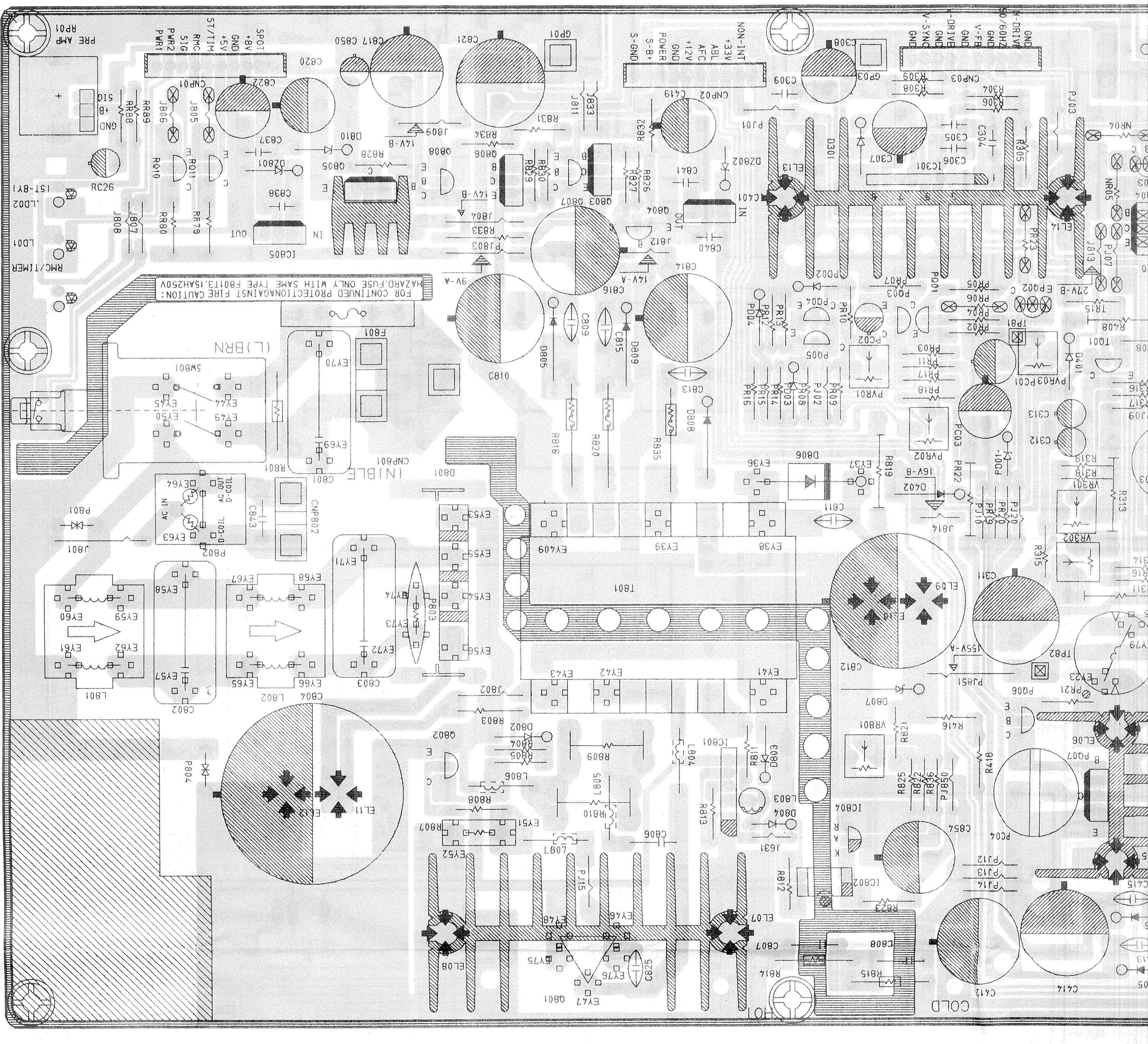

VR905
VR904
VR903
VR902
VR901
Q903
Q901
Q902
HEATER
CRTGND
CRTGND2
FBTGND
IF
B+
AFT
VL
AGC
VH
VT
UHF

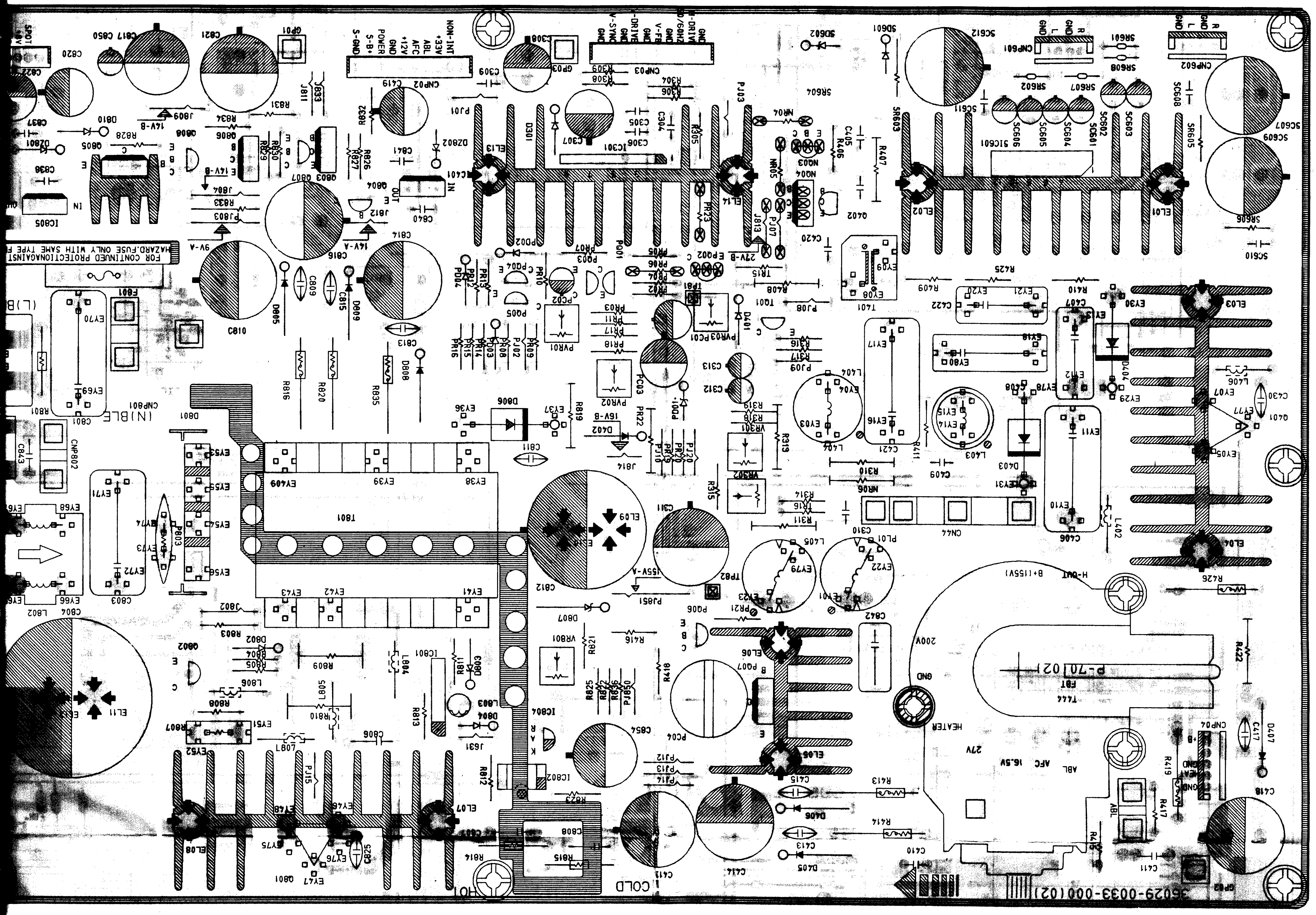
PWB-POWER

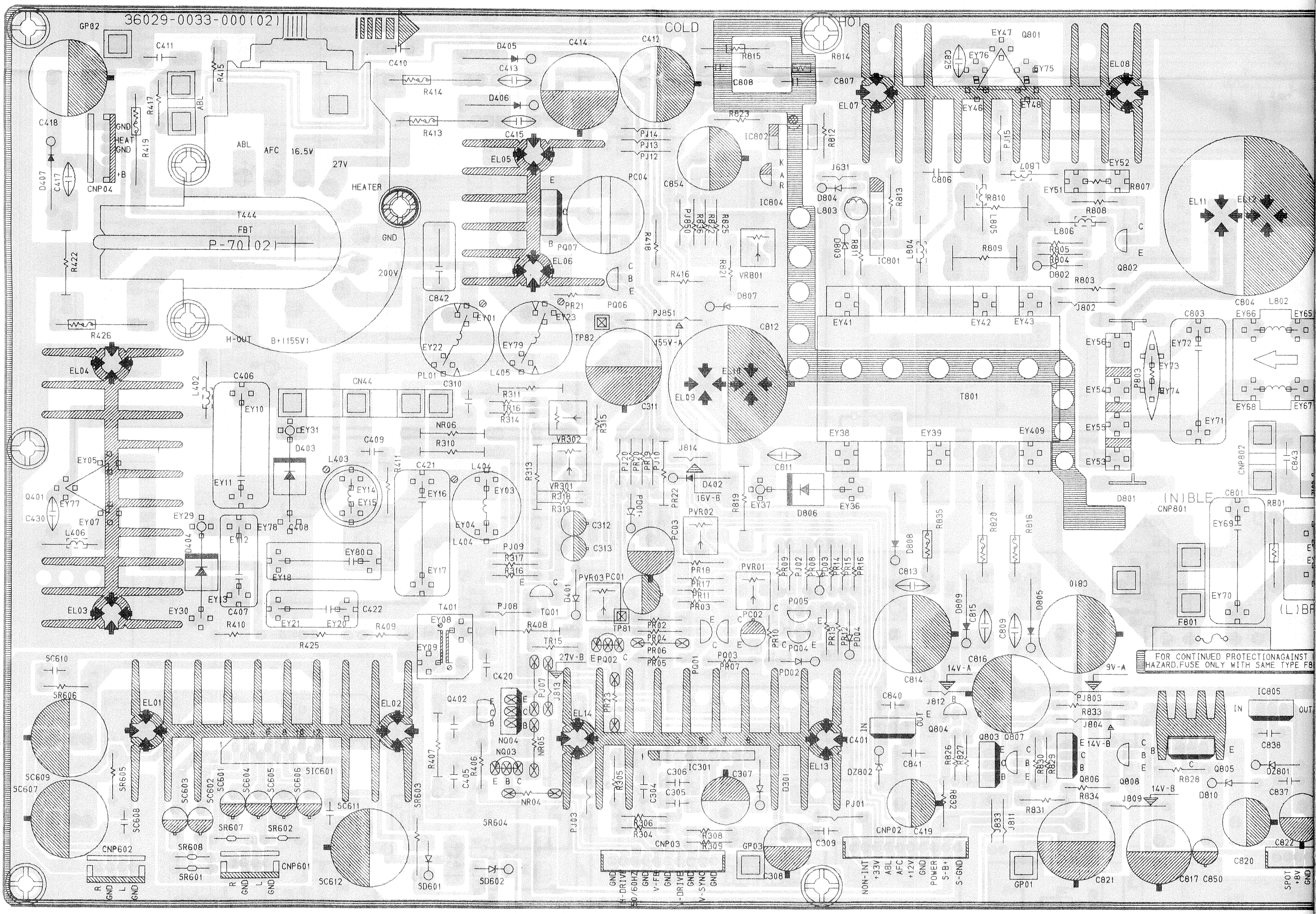

CAUTION: FOR CONTINUED PROTECTIONAGAINST FIRE HAZARD.FUSE ONLY WITH SAME TYPE F801T3.15AH250V
(L)BRN
(N)BLE
SW801
F801
T801
IC805
CNP801
CNP802
CNP01
CNP02
CNP03
COLD
HOT



PWB-POWER




FOR CONTINUED PROTECTION AGAINST
HAZARD, FUSE ONLY WITH SAME TYPE F
COLD
HOT
HEATER
GND
200V
27V
ABL
AFC
16.5V
H-OUT
B+(155V)
T444
FBT
P-70102
35029-0033-000(02)
T801
CNP801
CNP802
CNP02
CNP03
CNP601
CNP602
CNP04
NON-INT
+33V
ABL
AFC
+12V
GND
POWER
5-B+
S-GND
H-DRIVE
V-DRIVE
V-SYNC
V-FB
GND
50/60HZ
GND
R
L
GND
14V-B
14V-A
9V-A
22V-B
16V-B
155V-A


36029-0033-000(02)
COLD
HEATER
GND
ABL
AFC
16.5V
27V
200V
FBT
T444
P-70(02)
H-OUT
B+(155V)
T801
CN44
IC301
5IC601
CNP601
CNP602
CNP02
CNP03
CNP801
NON-INT
+33V
ABL
AFC
+12V
GND
POWER
S-B+
S-GND
H-DRIVE
50/60HZ
GND
V-FB
GND
V-DRIVE
V-SYNC
GND
R
GND
L
GND
FOR CONTINUED PROTECTIONAGAINST
HAZARD,FUSE ONLY WITH SAME TYPE F8
F801
(N)BLE
(L)BR
14V-A
9V-A
14V-B
16V-B
27V-B
155V-A
IC805
IC804
IC802
IC801
GP01
GP02
GP03